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ON THE

PRACTICE OF MEDICINE.

BY THE LATE

ROBERT J. GRAVES, M.D., F.R.S.,

PROFESSOR OF THE INSTITUTES OF MEDICINE IN THE SCHOOL OF PHYSIC IN IRELAND.

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CLINICAL LECTURES

ON THE

PRACTICE OF MEDICINE.

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DISEASES OF THE RESPIRATORY ORGANS.

LECTURE XXXIX.

HOARSENESS.—CROUP.—BRONCHITIS.

I PURPOSE, gentlemen, to devote the present and a few subsequent lectures to a clinical inquiry into some of the most important affections of the respiratory organs; you are not, however, to expect that I will be bound down to follow any methodical arrangement, or give you a complete description of any single disease; it will be much more to your benefit that I should direct your attention to bedside features and symptoms, which are so apt to be overlooked by the mere systematic compiler. And first let me offer you a few detached observations on hoarseness or loss of voice from sore throat or slight laryngeal inflammation—a form of disease at times very prevalent.

A form of hoarseness is frequently observed in growing boys or girls, which assumes a very chronic character, and often resists for a long time almost every sort of treatment. A boy gets cold, followed by sore throat and feverish symptoms, which may last for a few days, and then disappear under the use of aperient medicine, or perhaps without any interference on the part of the parents or the physician. The feverishness and soreness of throat subside, but the hoarseness remains, and the boy can speak only in whispers. This condition may last for weeks, and even months, without any other symptoms whatever; the patient has no cough or difficulty of breathing; his appetite is good, sleep and digestion natural, and there is no appearance of emaciation. The only thing amiss with him is the impairment of voice, and this continues so long that it gives rise to a considerable degree of anxiety on the part of his parents. When you examine the fauces, you find no appearance of inflammation in the mucous membrane, and there is no superficial or deep-seated tenderness in the region of the larynx.

How are you to treat this form of disease? It depends on a relaxed and weakened state of the chordæ vocales, and perhaps the muscles of the larynx—the result of inflammation of an exceedingly chronic character—and will not be benefited by leeches, or antiphlogistics, or low diet. The best thing you can do in such a case is to have recourse to the use of strong stimulant gargles. You begin with a drachm of the tincture of capsicum in six ounces of decoction of bark, which is to be used five or six times a day. After some time you can increase the quantity of tincture of capsicum, but you need never go further than half an ounce in a six-ounce mixture.

In the next place, you will have recourse to frictions over the region of the larynx and external fauces, with croton oil, which is much better adapted for such cases than tartar emetic ointment. The eruption produced by tartar emetic ointment is productive of a great deal of annoyance, and when the pustules break they prevent the boy from wearing his neckcloth. All the purposes of a counter-irritant are quite as well fulfilled by croton oil, and with much less inconvenience. The best form for using it is the following:—Compound camphor liniment, an ounce; croton oil, twenty minims; mix. Of this mixture a small quantity, say a couple of drachms, should be poured into a saucer, and rubbed over the fore part of the neck night and morning, until a full crop of pimples appears. When these have dried up and desquamated, it should be again applied, and in this way a mild and manageable, but very effectual, degree of counter-irritation can be kept up for any length of time. In addition to these measures, should the disease continue, I would strongly recommend small doses of iodine and change of air. I have been induced to give iodine in such cases, from observing that inflammation of a chronic character seems to have many points of resemblance to that which arises from scrofula.

The last thing which I have to observe on this form of hoarseness is that you should, particularly in the beginning, insist on the observance of strict silence—a point which is said to be exceedingly hard to be attained where the patient happens to be a female. In some cases all these means fail, and then something more energetic must be attempted. The inhalation of the vapour arising from tincture of iodine and tincture of conium, added to hot water in a proper apparatus, has proved useful to some; but in all obstinate cases the sheet-anchor is mercury exhibited internally, and by means of inhaling the fumes of hydrargyrum cum cretâ. In general it is necessary to continue the mercurials until the mouth is slightly touched, when the hoarseness will be found to yield.

It is obvious that, before we employ mercury in a case of chronic hoarseness, we must feel well assured that we have not to deal with a hoarseness arising from a phthisical tendency, for in this case mercury might prove injurious to the constitution. In such cases the stethoscope and percussion often afford valuable assistance, by showing that although the patient has had a hoarseness and cough for weeks, or even months, yet there are no symptoms of tubercular development in the lungs. The cough is only the result of laryngeal inflammation or irritation; the submaxillary glands and the amygdalæ are often slightly enlarged, the fauces are red, and the back of the pharynx is covered with irregular superficial excoriations.

Connected with the subject of sore throat is the discovery, announced by Velpeau, of the use of alum in powder in acute cynanche tonsillaris. He states that this powder, applied by means of the finger to the fauces and inflamed parts, exercises a wonderful effect. The symptoms, says Velpeau, are stopped as if by enchantment, the fever diminishes, the redness and tumefaction of the inflamed parts subside, the appetite returns, and convalescence is speedily established. This application is successful at any period before suppuration has been established. Alum has long since been applied in substance to the throat, in cases of angina maligna, and in chronic sore throat; but, before Velpeau, no practitioner ever dreamed of making use of alum as a local application during the first stages of acute cynanche tonsillaris; subsequent experience, however, has proved that he much overrated its efficacy when thus applied, although it sometimes does effect a cure. By the way, this use of alum is calculated to throw some light on the good effects which this substance exerts, when taken in large doses, in cases of violent pain in the stomach arising from indigestion, as recommended by Dr. Griffin, of Limerick.

And now a word or two on the treatment of croup. In the eighth volume of the *Dublin Medical Journal* I published an account of a new method of treating this disease, which was proposed by Dr. Lehman, of Torgau. This method has the advantages of being simple, efficacious, and easily applied, and its good effects are not productive of any injury to the constitution. The proper time for the application of this method is at the commencement of the disorder, when, as is usually the case, the child is awakened suddenly during the night by its invasion; no time should be lost, when we observe that the breathing is anxious, disturbed, and attended with the well-known croupy sound, and a cough of a ringing character, &c. The symptoms are too well known to require enumeration here; suffice it to say, that the most speedily fatal cases are those where the child goes to bed, apparently quite well, and not labouring under any catarrhal symptoms, and is awakened from a deep sleep by the attack of croup. Such cases often prove fatal in twenty-four hours. Even when thus intense, the disease may be arrested in its progress, by the immediate application of hot water, in the following manner: a sponge, about the size of a large fist, dipped in water as hot as the hand can bear, must be gently squeezed half dry, and instantly applied beneath the little sufferer's chin, over the larynx and windpipe; when the sponge has thus been held for a few minutes in contact with the skin, its temperature begins to sink, and it requires to be dipped again in hot water. It is better to have a second sponge ready, so that they may be applied alternately. A perseverance in this plan, during from ten to twenty minutes, produces a vivid redness of the skin over the whole front of the throat, just as if a strong sinapism had been applied: this redness must not be attended or followed by vesication. In the meantime the whole system feels the influence of the topical treatment: a warm perspiration breaks out, which must be encouraged by warm drinks, as whey, weak tea, &c., and a notable diminution takes place in the frequency and tone of the cough, while the hoarseness almost disappears, and the rough, ringing tone of voice subsides, along with the dyspnœa and restlessness; in short, all danger is over, and the little patient again falls asleep, and awakens in the morning without any appearance of having recently suffered from so dangerous an attack.

Since then I have repeatedly treated the disease on this plan, and with the most uniform success. It is, however, only applicable to those cases which are seen at the very onset of the disease, and you must remember, also, that I do not propose it to the total exclusion of bleeding and tartar emetic, which must be used in the more aggravated cases, or in those which are not seen until the disease is somewhat advanced.

I may shortly mention to you two cases which occurred recently, and which I treated thus. One was the infant daughter of a lady residing in Fitzwilliam Square; the attack was sudden and very violent; I saw it immediately, and directed the relays of hot sponges to be assiduously applied until relief was produced: the cure was rapid and complete. The other was a lady aged 35; she had an attack of croup about four years previously, when she was bled, leeched, and nauseated. I treated her on the sponge plan alone, and she was cured much more speedily.

Some time after the appearance of my remarks on this subject in the *Dublin Journal*, I received a letter of thanks from an American physician for enabling him, as he said, to save numerous lives by this plan of treating croup.

It is very much the custom, gentlemen, with those who lecture on auscultation to enumerate many sounds as connected with alterations in the condition of the bronchial tubes. We hear of the mucous, the sonorous, and the sibilant ronchus—their varieties and intermixtures. Now I know by experience that these names are very apt to confuse and perplex the young stethoscopist. There is no necessity for studying with great attention the definition of these words, or the descriptions of the various sounds they are meant to represent: I am always anxious to avoid loading the memory of the student with names. With regard to the rales in bronchitis, all he need bear in mind is, that the nature of the sound produced by air passing through the bronchial tubes will be modified accordingly as these tubes are large and small, dry or moist, or as the moisture they contain is thin or not. The two things of greatest importance in examining a case of bronchitis are to ascertain whether the minute bronchial ramifications are engaged, and, if the tubes contain any moisture, whether it is thin or viscid.

I seldom, therefore, confuse the student by telling him whether the rale is sibilant or sonorous. When asked about the nature of the sounds heard in a case of bronchial inflammation, all I say in reply is this: that the sounds are produced by the large or small bronchial tubes, and that they are either moist or dry. When the large bronchi alone are inflamed, the sounds issuing from the lung subjacent to the stethoscope are comparatively few in number, seldom exceeding two or three; they are likewise, when dry, of a grave tone, resembling the prolonged note of a violoncello, or the cooing of a dove; or when moist, the bubbles are large, scattered, uneven. When the minute tubes are engaged, we hear, on the contrary, not a few but many sounds, evidently proceeding from a small portion of lung; three, four, or even six or seven sounds may be perceived together, or circumscribed within very narrow limits.

These sounds undergo rapid changes of tone during the same respiration, while every moment some of them appear to cease, to be replaced by new ones. The wheezing they produce, when dry, is sharp; but observe, it is very unusual to find every one of them dry; when dry sounds occur they are generally accompanied by others, equally minute, but evidently moist. The moment I find, on applying the stethoscope, that a great many sounds are heard over a small spot, and that these sounds are dry and sharp, or are accompanied by certain modifications denoting the passage of air through fluid, I call the disease inflammation of the minute bronchial tubes, with increased secretion obstructing the free entrance of air. An attention to these considerations is of great importance in ascertaining the nature of acute or chronic bronchitis; for the danger is not only proportioned to the extent of the disease, but also the circumstances of the minute tubes being engaged, and the quantity of fluid they contain. The sound shows that not only the minute tubes are diseased, but also that there is a considerable quantity of viscid fluid in them, preventing the entrance of air into the air-cells, and tending to produce asphyxia.

Allow me now to direct your attention to the case of J. Jowson, in the chronic ward, who labours under an attack of exasperated chronic bronchitis—a disease which derives its chief importance from the circumstance of being exceedingly common. There is no morbid affection of the system more frequent or more general than chronic bronchitis; it is of every-day occurrence in dispensary practice; it is one of those cases which you will be constantly called on to treat; and hence the study of its nature and treatment has strong claims on your attention.

Bronchitis is an affection which generally arises from impressions made by cold, either on the skin or on the mucous membrane of the lung. I think it extremely probable that, when a person gets a catarrhal affection from exposure to cold, it is not always in consequence of an impression made on some part of the cutaneous surface. Indeed it appears reasonable to believe that an attack of bronchial inflammation may be equally the result of an impression made directly on the mucous lining of the lung; and that a person exposed to sudden change of temperature, as in passing from a heated room into the cold air, may get inflammation of the mucous membrane of the bronchial tubes, for the same reasons that, under similar circumstances, inflammation may be generated in the mucous membrane of the eye giving rise to conjunctivitis. We know well that one of the most common causes of inflammation of the conjunctiva is the sudden exposure of the eye to cold sharp air, after it has been for some time submitted to the relaxing influences of strong heat and light; and there is no reason why the same rapid change of temperature, under similar predisposing causes, should not originate disease in the mucous membrane of the bronchial tubes.

It is true, indeed, that nature has taken especial pains to maintain an equable temperature in the air admitted into the chest at each respiration; the passage of this air through the mouth, nose, and pharynx, where it is warmed by the contact of an extensive mucous surface, and the small proportion which it bears to the residual air remaining in the lungs after an ordinary expiration, are circumstances that must powerfully counteract the low temperature of the air inspired in very cold weather. Still a considerable difference of temperature must exist between the inspired or expired air, and consequently the air-passages are exposed, *more than any other tissue of the body*, to successive and rapid alternations, which never cease from infancy to old age. Nature has, of course, wisely accommodated the vitality of the bronchial mucous membrane to the circumstances in which it is placed, and the force of a never-ceasing habit still further enables it to sustain rapid vicissitudes of temperature with impunity. In this it is probably equalled by the surface of the eyeball, which, alternately covered, warmed, and moistened by the eyelids during the act of winking, and exposed to the cold of the air, increased by a rapid evaporation from its own surface while the eye is open, must, indeed, undergo rapid variations of temperature, and yet it is never frost-bitten.

When inflammation has fastened on the mucous membrane of the air-passages, it makes a vast difference as to the part on which it fixes. The air-passages commence with the larynx, and terminate with the ultimate ramifications of the bronchial tubes. If the disease settles at the entrance of the air-passages, and forms laryngitis, the case becomes a very serious one, laryngitis being, in the infant, and sometimes also in the adult, attended with dangerous and even fatal symptoms. If the trachea should happen to be the part on which the disease falls, the inconvenience and suffering are also considerable, but the danger is by no means so urgent as in the former case. The same thing may be said of the larger bronchial tubes; inflammation here is rarely attended with such violent symptoms as those which characterize laryngitis, and it is much more amenable to treatment. But when inflammation attacks the minute bronchial tubes to any considerable extent, and particularly if it happens to be general—that is, if it affects the bronchial tubes in every part of the lungs—we have just grounds for alarm; the disease is one of an intense character, and unless quickly relieved, runs on to a fatal termination with great rapidity.

You perceive, then, that if a patient catches cold, and gets an attack on the chest, it is of great importance to be able to ascertain what the situation and extent of the disease are, and whether the minute bronchial tubes are engaged or not. Now, how do you know this? Simply thus:—You first make a cursory examination of the whole chest, by applying the stethoscope over the superior, middle, and inferior portion of each lung, both before and behind; and if you everywhere hear something, you conclude that the bronchitis is general, and not confined to any particular part. You next proceed to examine with greater attention these wheezing sounds; you apply the stethoscope, and if you find in each separate spot many sources of diseased sound—*if you hear a wheezing from a great many points close together*—you may be sure that the morbid sound proceeds from inflammation of the minute tubes, for the larger ones cannot exist in the small spots over which you apply the stethoscope in such numbers as to give rise to so remarkable a plurality of sounds. Of this you may be certain, that when you find a great many sounds are audible over a small space, the minute bronchial ramifications are engaged.

This man, to whose case I have called your attention, is, as you have seen, about the middle age in point of years, but he is old in constitution. In this country you will find most of the labouring poor exhibiting symptoms of premature old age—the combined result of poverty, intemperance, and hardship. Obliged to work in the open air in bad weather, they get catarrhal affections, which are renewed by repeated exposure, and prolonged for want of proper care. The natural effect of cold frequently renewed and generally neglected is, that a tendency is produced in the bronchial mucous membrane to become congested and inflamed with facility, until at length the derangement becomes permanent, and the mucous membrane no longer returns to its normal and healthy condition during the intervals.

The secretion of the mucous membrane of the bronchial tubes, in a perfectly healthy person, is almost entirely destitute of matter to be expectorated. In the normal state, the secretion of the bronchial mucous membrane, though continually going on, scarcely ever exists in superfluous quantity, for a certain proportion of it is carried off by exhalation or absorption; *a perfectly healthy person, breathing a pure air, has no expectoration whatsoever.* The moisture secreted by his bronchial mucous membrane contains nothing that the expired air cannot carry away in vapour, without leaving any residuum, which, gradually accumulating, would at length require to be expectorated. In this respect the bronchial mucus in the healthy state differs from the mucus of other membranes of the same class; but disease destroys this beautiful provision, and gives rise to a secretion of morbid mucus which cannot be gotten rid of in the usual way, and which must therefore be expectorated. Hence it is that persons in whom a chronic state of congestion of the bronchial membrane has been generated by repeated colds, have a secretion of superfluous matter always going on, and are constantly expectorating. This may continue for several years without much inconvenience; the principal annoyance the patient suffers is in getting up the phlegm in the morning. At this period there is always an accumulation of fluid in the lungs after the night, during which the cough is less frequent, and expectoration less copious.

Here let me remark that, although a person may cough violently during his sleep, he never expectorates. Expectoration is accomplished by the attention being directed to the chest, by an act of volition being put in force, so as to cause a constriction of the bronchial tubes, and generate a current of air of sufficient strength to expel the mucus. To effect this the mere act of coughing is not sufficient, and consequently *we do not expectorate during sleep;* for this purpose it is necessary for the patient to be awake.

Frequently recurring catarrhal affections, besides generating a state of chronic derangement of the mucous lining of the lungs, have a necessary tendency to produce other bad effects. Dyspnœa is an ordinary attendant on chronic bronchitis; the vascular tissue, enfeebled by disease, loses its natural elasticity; and hence the act of respiration is performed weakly, and with considerable difficulty. In addition to this, the stress thrown on the air-cells and passages gives rise to emphysema and dilatation of the bronchial tubes.

When this man came into the hospital, he was labouring under an exacerbation of his chronic bronchitis, from a fresh attack of cold; he also suffered from dyspnœa, with a tendency to emphysema, and had been much debilitated by the frequent recurrence of his pulmonary symptoms. I do not intend to make any particular observations here on acute bronchitis supervening on chronic; it is a dangerous disease, requiring prompt and careful attention. I merely refer to this case to point out the remedies which were employed, and the principles which guided me in their selection.

At the time of our patient's admission, the fever which accompanied the acute attack had subsided. His pulse was tolerably quiet, neither did he present any derangement of the heart's action, and, so far, had escaped one of the consequences of chronic disease of the lung—namely, dilatation and hypertrophy of the right ventricle. Observe, the most important features in this case, so far as treatment is concerned, were these: there was no general inflammatory condition of the system present; he had neither hot skin nor quick pulse; his expectoration was copious; the chest sounded well on percussion, and the only stethoscopic phenomena observed were extensive, minute, and moist bronchial rales.

The case then stood thus: extensive bronchial inflammation with copious expectoration, unaccompanied by fever, and occurring in a debilitated constitution. All weakening measures were therefore contra-indicated. It is true that the man had dyspnœa, and complained of tightness across his chest—circumstances which might appear to demand the use of the lancet or leeches; if these means had been employed, he would certainly have experienced some relief; but in the course of a few hours the symptoms of distress would have returned, the weakness superinduced by bleeding would give rise to increased secretion into the bronchial tubes, and the patient would be worse than before. Under these circumstances, we refrained from using the lancet or leeches; but, deeming it advisable to get rid of the last traces of inflammatory action, we ordered the following mixture:—

℞. Misturæ Amygdalarum, f℥xij.
Nitratis Potassæ, ʒij.
Tartari Emetici, gr. j.
Tincturæ Opii Camphoratæ, f℥ss.

Fiat mistura pectoralis, cujus sumat cochleare unum amplum omni hora.

In explaining the rationale of this mixture, it is hardly necessary for me to state why the almond emulsion was used. In all cough bottles it is of importance that the basis should consist of some mild mucilaginous fluid; and hence we generally employ for this purpose demulcent syrups, emulsions made with olive oil, spermaceti, or almonds, or decoctions of mucilaginous seeds and roots. With the almond emulsion we combined tartar emetic and nitrate of potash—both antiphlogistic remedies, and calculated to act with peculiar effect in relieving congestion of the bronchial mucous membrane. You are aware that nitrate of potash in large doses is a powerful antiphlogistic, and you have seen it prescribed with excellent effects in cases of acute arthritis treated in this hospital. Nitrate of potash, when given to the amount of two or three drachms in the day, combined with two or three grains of tartar emetic, is next to bleeding the most efficient means we possess of reducing inflammatory action; and were I to be asked what remedies I should employ in combating inflammation—supposing there were no such things as the lancet, or leeches, or calomel—I should certainly say nitrate of potash and tartar emetic. When given in small doses, this combination proves also extremely serviceable in less severe cases, and it was on this account we gave it in the present instance. To this we joined the camphorated tincture of opium, convinced that its stimulant properties could not prove injurious when combined with antiphlogistics, although it would be improper to administer it alone. Experience has taught that when camphorated tincture of opium is given, in cases of chronic cough with expectoration, it will, if much inflammatory action be present, check the expectoration and bring on dyspnœa. But when combined with nitrate of potash and tartar emetic, its bad effects were corrected, while its sedative influence remained unimpaired.

In addition to this, I ordered the nitro-muriatic acid liniment to be rubbed over his chest. This liniment we are much in the habit of prescribing where a rubefacient is required. It is made by diligently mixing one drachm of nitro-muriatic acid and one ounce of lard, by means of a wooden or ivory spatula. When this mixture is complete, two drachms of oil of turpentine are added; these ingredients soon separate from, and mutually react on each other, so that the liniment becomes spoiled; we, therefore, never make it in large quantities. As his bowels were constipated, I gave him a pill composed of three grains of blue pill, quarter of a grain of colchicum, two grains of scammony, and half a grain of capsicum. Colchicum acts on the biliary secretion, particularly when combined with blue pill, and hence promotes the general action of the intestines. With these I combined a little capsicum, in consequence of the patient complaining of being annoyed by constant flatulence.

It is a curious fact, that every chronic derangement of the bronchial mucous membrane is accompanied by flatulence. Whether this arises from the irritation of the bronchial membrane spreading by continuity of tissue, and rendering the tongue foul, the stomach weak, and the digestive function unnatural; or whether the derangement of the bronchial mucous membrane, and the imperfect performance of the function of respiration, cause the secretion of air from the lungs to be diminished, in consequence of which air is secreted from the intestinal mucous membrane by a vicarious action—I cannot exactly state, but I think the latter hypothesis is not very improbable. It is well known that the mucous membrane of the stomach and bowels enjoys the power of secreting and absorbing air; it secretes carbonic acid, nitrogen, and also other gases which seem peculiar to it—such as sulphuretted hydrogen. I am not aware that there is any distinct evidence that the last-named gas is ever secreted by the bronchial mucous membrane, but as there are some cases in which the breath is remarkably fœtid, I think it remains for further experiments to decide whether it may not be so under certain circumstances. It is, however, by no means improbable that when an adequate cause produces considerable derangement in the respiratory function, and alters the nature of the aërial secretion from the lung, the mucous lining of the stomach and bowels may take on a vicarious action, and secrete gases analogous to those which in the normal state are secreted by the mucous membrane of the bronchial tubes.

I think I have seen some well marked examples of this translation of the function of secreting air from the pulmonary to the intestinal mucous system, in cases of spasmodic asthma and hysteria. I have seen patients who, previously to an attack of asthma, had no symptoms of flatulence, and observed that, according as the disease proceeded and the derangement of the respiratory function increased, the bowels became distended with air. In hysteria, also, where derangement of the respiratory function is plainly denoted by the heaving of the chest, sighing, and dyspnœa, there is generally enormous and sudden inflation of the belly, loud borborygmi are heard, and there is a constant disengagement of air upwards and downwards.

But to return to our patient. After we had removed all traces of active inflammation, and the case had been reduced to one of ordinary chronic bronchitis, we changed his cough mixture for the following:—

℞. Misturæ Ammoniaci, f℥vj.
Carbonatis Sodæ, ʒss.
Tincturæ Opii Camphoratæ, f℥ss.
Tincturæ Hyoscyami, fʒj.
Vini Ipecacuanhæ, fʒij.

Fiat mistura pectoralis, cujus sumat cochleare amplum pro dosi.

The carbonate of soda was given with the view of removing some acidity of stomach which he complained of; besides, it is a fact that alkalies produce good effects in many cases of pulmonary irritation, as must have struck you from witnessing the success of the popular remedy for hooping cough recommended by Mr. Pearson. You will observe, gentlemen, how very different this cough mixture is from the former; it is much more stimulating, and at the same time more powerfully anodyne, the opium being here less diluted, and being aided by henbane; the addition of ipecacuanha was introduced to prevent a too speedy action on the part of the other ingredients, in diminishing the expectoration and constipating the bowels.

I wish to call your attention to the plan of treatment, not with reference to this case alone, but with respect to chronic bronchitis in general. We first gave a combination of nitrate of potash and tartar emetic, with the view of removing any remaining traces of inflammatory action; we next prescribed the ammoniacum mixture, with camphorated tincture of opium, carbonate of soda, &c.; and, finally, when the cough became entirely chronic, we gave the compound iron mixture with tincture of hyoscyamus, in draughts, and an electuary consisting of sulphur, cream of tartar, and senna. I need not repeat what you will find in every treatise on materia medica, with respect to the use of the compound iron mixture; it is not to be given until all traces of fever and local inflammation are removed, and never until the secretion from the lungs is copious, and expectoration free.

In such cases the patient is generally weak, and the inordinate secretion adds to his debility. Here the compound iron mixture proves extremely serviceable, but you should commence its use with caution. Some persons are in the habit of giving it in doses of half an ounce, two or three times a day; this I never do; I begin with a drachm twice or three times a day, in an ounce of spearmint water, and add from half a drachm to a drachm of tincture of hyoscyamus. The dilution with mint water, and the addition of tincture of hyoscyamus, render it more valuable, by causing it to be more easily borne by the system, and less likely to be rejected by the stomach.

Let me now explain my reasons for ordering the following electuary:—

℞. Electuarii Sennæ, ℥iij.
Bitartratis Potassæ, ℥j.
Sulphuris Loti, ℥ss.
Syrupi Zingiberis, quantum sufficit ut fiat electuarium, cujus sumat cochleare unum parvum bis vel ter quotidie.

In the first place, when giving any stimulant medicine internally, it is essentially necessary to attend to the state of the bowels; in the next place, keeping the bowels freely opened has a very remarkable effect in diminishing inordinate secretion from the bronchial tubes. Where the patient's strength can bear it, I often diminish excessive secretion from the lungs by strong hydragogue purgatives, as you saw in the case of a patient in the chronic ward, who had orthopnœa, and such an excessive secretion into the bronchial tubes as to threaten suffocation. The patient being a strong man, and having no symptom of intestinal irritation, I prescribed a bolus composed of a grain of elaterium, two of calomel, ten of jalap, and five of scammony, forming a powerful hydragogue purgative, which produced several fluid discharges. The man bore its operation well, and I repeated it in two days with the most decided benefit; indeed, he experienced from it more complete relief than he would have done from bleeding, blistering, or any other remedial means. In some cases of bronchitis with excessive secretion, you will be able to produce very striking effects by the use of hydragogue purgatives; this, however, will require both judgment and discretion, and it should be borne in mind that, in the majority of cases, there are many circumstances which contra-indicate their employment.

With respect to the use of sulphur in this case, I was led to prescribe it in this and many other similar cases, from observing that chronic cough and long-continued congestion of the bronchial mucous membrane were more effectually relieved by the use of sulphureous waters, such as the Lucan and Harrogate Spas, than by any other remedy that could be devised. I may here also observe that the Lucan waters produce very striking effects in diseases of the skin, and that I have seen intractable cases of psoriasis, which lasted for years, yield to the use of the Lucan waters.

It would appear that sulphur, when taken into the system, is either eliminated by the kidneys in the form of sulphates, or exhaled from the skin and mucous tissues in the form of sulphuretted hydrogen, and in this way we arrive at some explanation of its action in diseases of the skin, and chronic irritation of the bronchial mucous membrane. In fact, paradoxical as it may appear, sulphur, although evidently stimulating, is nevertheless very efficacious in curing many diseases connected with, or depending on, inflammation or congestion. Thus, exhibited internally and properly combined, what remedy gives such prompt and certain relief in that painful affection, piles? How rapidly does the specific irritation of the skin, termed scabies, yield to its use? These, and similar facts, which might be brought forward in abundance, ought to countenance the use of this medicine in certain chronic inflammatory affections of the bronchial tubes. The celebrated Hoffman was in the habit of adding sulphur to his cough prescriptions in all cases of chronic bronchitis in the aged and debilitated: and I have no doubt that from five to ten grains of sulphur, taken three or four times in the day, is one of the best remedies that can be prescribed in cases of chronic cough, accompanied by constitutional debility and copious secretion into the bronchial tubes. Within the last four years, my attention has been particularly directed to the use of sulphur in this and other affections, and I can state from experience that it is a most valuable remedy. As it has a tendency to produce elevation of the pulse, increased heat of skin, and sweating, it will be necessary to temper its stimulant properties by combining it with cream of tartar, which is a cooling aperient, and has the additional advantage of determining gently to the kidneys.* The addition of the electuary of senna gives additional value to the combination, and quickens its action on the intestines.

Such, gentlemen, are the principles that guided me in prescribing for this man. The long continuance of the complaint, the serious and extensive derangement of the pulmonary mucous membrane, the age, debility, and impoverished circumstances of the patient, forbid me to hope for a perfect cure; but he has been much relieved, and the same remedies applied to less desperate cases would have produced very striking effects. Still, if fortune were this moment to prove favourable to the poor fellow—if, when he leaves the hospital, instead of returning to hardship and exposure, he had the means of living in comfort, taking proper care of himself, travelling for health and amusement, and using a course of chalybeate spa waters,—I have little doubt that with these aids the reparative powers of nature would succeed in obliterating every trace of pulmonary derangement.

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* Baglivi has well said, "In morbis pectoris ad vias urinæ ducendum est."

There is in the small chronic ward another case of chronic bronchitis, in a man named Murray. The case is of very long standing and has undergone many exacerbations. It is a case in which I am afraid a permanent cure is out of the question, and so far it is unsatisfactory; but it is still necessary to be acquainted with such cases, for it is a matter of some importance to be able to inform a patient whether his disease is curable or not, and how far it admits of being relieved by treatment.

In Murray's case we found, on examining the chest, that the minute bronchial tubes were extensively engaged, and they were obstructed by a copious secretion of mucus producing considerable dyspnœa. We found, however, that this condition had lasted for many months, and that the disease was essentially chronic. He had no fever; his skin was cool; his tongue moist; appetite and digestion good; and his pulse, which had been only 60 on his admission, sank to 46 after he had been in bed for some days. Such extreme lowness of pulse as this is a very remarkable circumstance, particularly in cases of pulmonary disease: it is seldom met with except in cases of cerebral affections.

Here was a man breathing twenty-six times in a minute, and with a pulse at 46; whereas, if the pulse was proportioned to the respiration it would have been much quicker. The relation of the number of respirations to the beats of the artery at the wrist should be as one to four; thus, when we breathe fifteen times in a minute the pulse should be at 60. But here we find a man breathing twenty-six times in a minute, and yet his pulse is only 46. We had another instance like this, in a patient in the chronic ward, whose pulse was 60, while his respirations were thirty-six in a minute. It seldom happens, when pulmonary disease is in the acute form, and respiration considerably accelerated, that there is not a corresponding increase in the frequency of the pulse; but, in chronic cases of this description, the system becomes gradually accustomed to the derangement; the continued acceleration of breathing ceases to affect the action of the heart; the lung which is obstructed by disease in the performance of its functions, contrives, by working more frequently, to aërate the requisite quantity of blood, and, the heart adapting itself to the change of circumstances, the pulse returns gradually to the natural standard. I have seen many cases of phthisis in which there was accelerated breathing, with slow pulse, but these were always cases of a chronic kind. I have never observed the same phenomena co-existing when the disease was acute; it is a state of things which is compatible only with chronicity of disease, in which the system becomes gradually accustomed to the change, and a kind of artificial equilibrium is finally established.

In this case we find that a man of tolerably good constitution, after exposure to cold, gets an attack of bronchitis, which becomes chronic, and extends almost over the whole lung. He has a cough always existing, sometimes better, sometimes worse, occasionally aggravated. This cough is accompanied by a copious secretion of mucus; and this state of things continues for more than twelve months. Now, when bronchitis has lasted so long in persons of his class of life it is very difficult to be cured; poverty, want of proper clothing, his liability, from the nature of his employment, to the ordinary exciting causes of bronchitis, and the habitual disregard of self so constantly observed in persons of this description, are all circumstances which forbid us to entertain any hope of giving permanent relief.

There are two points to be attended to in the treatment of this and every other case of chronic bronchitis; first, whether there be any recent attack, and consequently any fever and exacerbation of the local symptoms present; and, in the next place, whether the secretion from the bronchial mucous membrane be copious or scanty. Now, at the period of this man's admission, there was some slight excitement of the pulse, but there was no fever nor increase of bronchial inflammation present, and the heart's action was apparently not influenced by the state of the lung. In addition to this, there was no urgent dyspnœa, and the secretion from the lungs was extremely abundant. We therefore commenced by administering an emetic, which was repeated for two or three days, and then prescribed the following mixture: compound iron mixture, fʒij; tincture of squill and tincture of hyoscyamus, of each, min. xx.; mix; to be taken three times a day in an ounce of almond emulsion.

In chronic bronchitis, where no fever, no remarkable dyspnœa or acceleration of the pulse is present, and where the bronchial secretion is very copious, you will be able to produce very good effects by giving an emetic every night for two or three nights, before you begin with remedies calculated to arrest the super-secretion from the lung. They are productive of a double advantage in such cases: a large quantity of mucus is discharged from the stomach and lungs, expectoration is rendered more easy, the tongue becomes clean, and the appetite is improved. It was on this account we gave them in the present case, and, as you have perceived, with much benefit.

In no disease are we more apt to have a foul, loaded, and furred tongue, than in bronchitis. This stage of the tongue, being usually accompanied by loss of appetite and indigestion, is frequently attributed to a bad stomach. Now the truth is, that in such cases the state of the tongue and the state of the stomach are both produced by one and the same cause, viz., the unnatural state of the bronchial mucous membrane. In the latter tissue the train of morbid actions commenced, and from it was derived that source of irritation which, inducing disease in the bronchial mucous membrane, caused a state of parts rapidly propagated along that membrane to the mouth and tongue on the one hand, and to the stomach on the other. We afterwards had recourse to a tonic and astringent chalybeate—the compound iron mixture —with the view of improving the general system, and checking the superabundant secretion from the bronchial tubes. The action of a chalybeate is not merely limited to strengthening the tone of the stomach and general system; it is also well calculated to arrest the superabundant secretion from mucous surfaces in many chronic fluxes, and hence its utility in gleet, diarrhœa, and chronic bronchitis. We gave the compound iron mixture in preference to a simple chalybeate, because the other ingredients —namely, myrrh and sub-carbonate of potash—have a tendency to produce the same effect.

I do not prescribe this medicine in such large doses as it is frequently ordered, and I never give it alone. I order a drachm or two to be taken three times a day, and I dilute this quantity by adding to it half an ounce or an ounce of almond emulsion or mint water. In this form it is a much safer remedy in the treatment of fluxes depending on chronic inflammation, and its exhibition is much less likely to be followed by sinister accidents.

I have in the present instance combined with it a small quantity of squill; the reason of making this addition is so obvious, that it is unnecessary for me to do more than notice the fact. I have also added some tincture of hyoscyamus, which is an extremely valuable sedative in the treatment of many forms of pulmonary disease.

However well planned this treatment seemed to be, it did not succeed. After taking the mixture for a day or two, the man began to complain of tightness across his chest, and we were obliged to give it up. I have already stated, that in cases of this description, where the patient is using remedies to arrest secretion, you should be cautious in administering them at first, and attend carefully to their effects. If, after a patient has been using a chalybeate, or any remedy administered for similar purposes, you find that constriction of the chest and dyspnœa are increased, no matter whether the secretion is diminished or not, you may be sure that you are doing more harm than good. When the remedy acts favourably, you may know by the following signs:—respiration becomes less frequent, and is performed with less distress, the expectoration becomes more free, the sputa begin to assume the globular form, the quantity is diminished, and it is less tenacious and viscid in its consistence. When you give a stimulant, therefore, in chronic bronchitis, you must watch its effects with care, and if it produce any increase in the difficulty of respiration, or any pain or tightness of chest, you must omit it altogether, and pass to an expectorant of a less irritating character. In this case we stopped the use of the compound iron mixture, and immediately ordered the patient to take a grain of tartar emetic in a pint of whey. This simple remedy succeeded in a very remarkable manner, producing, on the first day, a very considerable alleviation of symptoms.

Permit me here, gentlemen, to direct your attention for a moment to the influence which mercury exercises over inflammatory affections of the joints, and over certain forms of inflammation of the mucous membrane. I, in common with most practitioners, look upon mercury as a most valuable remedy in the treatment of arthritic inflammation, and in certain forms of bronchitis, but I do not, however, advise its indiscriminate employment, or bid you mercurialize every case of bronchitis or arthritic inflammation; you can cure very many cases of both without mercury, and you should only have recourse to it in emergencies, and where other remedies have failed. In treating bronchitis in general, I always try bleeding, leeching, blisters, and expectorants, before I have recourse to mercury. But where these fail, and the disease continues to wear a threatening aspect, you will often find that mercury will cure it in a very rapid and surprising manner.

You had an example of this in a boy who was lately under treatment in the chronic ward. He had severe laryngitis, with extensive inflammation of the smaller bronchial tubes, great dyspnœa, and considerable congestion of the lung; and you perceive that the moment he came under the influence of mercury, all his symptoms were ameliorated. We gave the mercury originally for the laryngeal affection, but, in giving it, remarked that it would also cure the bronchitis, and such was actually the case. Observe, I do not give mercury in bronchitis as a general rule,—it is often unnecessary, and even sometimes wholly inadmissible. I will except from this that severe form of bronchitis, with congestion of the lung, in children after measles, which is best treated with calomel and ipecacuanha, as recommended by Dr. Cheyne. Many children were lost by severe attacks of this form of bronchitis, and by hooping cough accompanied by congestion of the lung, until Dr. Cheyne hit upon this simple but effectual plan of treatment. But in ordinary bronchitis of an acute character, and producing a tendency to congestion of the lung, I do not prescribe mercury until other means have failed.

Now I believe every practical man is aware that mercury is one of the best remedies we can employ in many cases of acute and subacute bronchitis; but perhaps it is not generally known that even in some cases of chronic bronchitis, that is to say, where the patient labours under chronic catarrh with asthmatic symptoms, not only relief, but even a complete cure, is occasionally effected by the use of mercury. One of the first cases of this kind which struck me very forcibly was under the care of Mr. Porter. The patient, who laboured under an attack of venereal laryngitis, had at the same time chronic bronchitis, with puriform expectoration and hectic, and as the use of the stethoscope was not then well understood, was supposed to be labouring under phthisis. From the violence of the laryngeal symptoms, however, Mr. Porter was obliged to give mercury, which not only arrested the laryngeal inflammation, but also cured the chronic bronchitis.

I recollect, also, the case of an elderly gentleman, treated by Surgeon Mitchell, for an attack of very long-continued bronchitis, with asthmatic symptoms, and who was subject to paroxysms of coughing and violent dyspnœa, which sometimes lasted for twelve hours together. Now this gentleman, after the failure of various remedies, took mercury, and with the most marked and permanent relief of his pulmonary symptoms. I was, it must be confessed, greatly surprised by the effects of mercurialization in this case, and it was quite a novel thing to me to witness a chronic, a very chronic bronchitis, with copious expectoration and frequently recurring dyspnœa, aggravated so as to endanger life by the least cold,—it was, I say, novel to me to see a patient so affected radically cured by a mercurial salivation. Perhaps, however, nothing but the absolute refusal of the disease to yield to other remedies could authorize the adoption of such a plan in the present state of our knowledge.

LECTURE XL.

BRONCHITIC ASTHMA.—COUGH.

THERE is a patient about to leave the hospital to-day on whose case I wish to make some observations. This young man, whom you have seen lying in the chronic ward, in the bed next but one to Byrne's, caught cold about seven or eight months ago, followed by cough, wheezing, and dyspnœa, which, after a month or six weeks, subsided. About two months before he came into the hospital, he renewed his cold, and with it the cough and dyspnœa returned. On his admission, he complained of difficulty of breathing, which attacked him every night; he went to bed well, and slept tranquilly for two or three hours, and then was awakened by pain and sense of tightness in the chest, with great dyspnœa. When the paroxysm came on, it compelled him to get up and walk about the room, gasping for breath; and, after continuing for two or three hours with great dyspnœa, wheezing, anxiety, and cough went off with free expectoration and sweating. As soon as the sweating and expectoration appeared, he lay down without any inconvenience, and slept quietly until morning. The only additional symptom he complained of was palpitation of the heart, which sometimes affected him when employed at hard labour. On examining the lungs, there was nothing found except a few bronchitic rales. The heart was normal in its action, and no morbid sound could be detected by the stethoscope. In addition to this, you will recollect that the man was in the prime of life, had a full and well-formed chest, a quiet pulse, regular bowels, and a good appetite.

Here you perceive a man from repeated colds gets chronic irritation of the bronchial tubes, and this induces asthmatic paroxysms, which come on, as is usual in such cases, at a certain hour of the night. It was plain, therefore, that he was labouring under a well-marked form of asthma, a disease which, in its pure and simple state, is seldom met with in hospitals, being generally observed in connexion with disease of the heart, or long-continued bronchitis in old persons. Chronic bronchitis is one of the most common causes of asthma; indeed, you will scarcely ever meet a patient who has been subject to chronic irritation of the bronchial tubes, who does not also labour under more or less asthmatic dyspnœa. The disease is generally met with in persons advanced in life, and who have suffered from repeated attacks of bronchitis; it is not usual to find it in so young a man as this patient, and presenting, as he does, such very slight symptoms of derangement of the bronchial mucous membrane.

This case exhibits a remarkable proof of what may be done by simple means in relieving an urgent disease. The man was, with the exception of asthma, in good health; his bowels were regular, his appetite good, his pulse tranquil, and the signs of pulmonary irritation trifling. There was no necessity, then, for administering remedies to improve the tone of the digestive organs, nor were we authorized to use the lancet or apply leeches. I therefore confined my attention to two points: the application of irritants to the neck and chest externally, and the internal use of remedies calculated to relieve bronchial irritation. I ordered him to rub the nape and sides of the neck and the fore parts of the chest with a liniment composed of strong acetic acid, ʒss.; oil of turpentine, ʒiij.; rose water, ʒiss.; essential oil of lemons, a few drops, and yolk of egg in sufficient quantity to suspend the turpentine. This liniment is an imitation of the celebrated liniment of St. John Long. The exact formula made use of by that celebrated quack was, I believe, never authoritatively made public, but it is supposed on very good grounds to have been as follows:—The yolk of an egg; oil of turpentine, f℥iss.; strong acetic acid, f℥i.; pure water, f℥iij.; first rub the yolk of egg, the water, and the acetic acid together, then add the oil of turpentine, and agitate the whole until they are well mixed.*

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* An anecdote is told of St. John Long, which is a good illustration of the knowledge of chemistry requisite for prescribing: being anxious to use a still stronger counter-irritant in some cases, he added some water of ammonia with that view to the liniment prepared as I have now described; but, to his great surprise, instead of being stronger, it had lost all its previous powers; the water of ammonia combining with the acetic acid formed acetate of ammonia, and thus deprived that acid completely of its irritant properties!

The active ingredients are the oil of turpentine and strong acetic acid. The chief objection to the use of this liniment is its disagreeable smell, which may be somewhat alleviated and its rubefacient powers at the same time increased by the addition of a drachm of oil of rosemary; it should be applied by means of a sponge. It acts as a rubefacient, and generally induces an eruption of small pimples after a few applications.

With this liniment our patient was desired to rub the fore part of the chest and the nape and sides of the neck. It was applied to the chest with the view of relieving the bronchial irritation, and we ordered it to be rubbed over the nape of the neck, along the course of the cervical portion of the spinal marrow, and over the sides of the neck along the course of the pneumogastric nerve, because all the organs to which the latter nerve is distributed are evidently affected in cases of spasmodic asthma. Thus, a paroxysm of asthma is not only attended with increased action of the heart, dyspnœa, and hurried breathing, but also with marked derangement of the stomach, particularly towards the termination of the fit, when the patient generally has a feeling of uneasiness in the stomach, with flatulence and a sense of fulness, induced probably by the derangement of circulation in the lung. You are aware of the close sympathy which exists between the stomach and lungs, and you must have been struck with the fact, that stimulant and irritating remedies applied to the epigastrium often relieve affections of the lung more completely than when applied to the chest. Thus, in using the tartar emetic ointment for the relief of hooping cough, it has been found to act most beneficially when applied over the region of the stomach; and the same thing may be said of Roche's embrocation, which does more good when rubbed over the spine or epigastrium, than when applied to the parietes of the thorax. On these principles I ordered the counter-irritation to be applied over the course of the cervico-spinal and pneumogastric nerves, over the chest, and subsequently over the stomach.

This liniment in a very short time produces redness and heat of the parts to which it is applied, and it is more than probable that its effects are not limited to temporary rubefacience, but that it also acts on the nervous system. We have innumerable proofs that turpentine exercises a special influence over the nervous system, and we know that it is rapidly absorbed even without the aid of friction. I fear, however, that we shall never be able to confer on our liniment all the wonderful properties attributed to that of St. John Long. You know it has been asserted that St. John Long's liniment never reddened the skin, except over the exact spot where disease was situated. I was assured by a young lady who used this liniment, that she rubbed it all over the chest, and that it produced no discolouration of skin, except in two spots where she felt pain. She at first mentioned but one spot which was painful, but St. John Long having applied the liniment himself, told her she had deceived him, and that there was pain in another spot.

It had other effects equally miraculous. An eminent Dublin lawyer declared that it drew nearly a pint of water from his head, and Lord Ingestre testified that it extracted quicksilver from his brain! These, and other wonderful stories, told by several persons of distinction with a full belief in their authenticity, furnish a useful lesson to mankind, showing that gross credulity is not confined exclusively to the poor and the ignorant, but may be found among the highest classes of society. It is a singular fact also, and illustrative of the tendency which exists in human nature to deceive and be deceived, that notwithstanding the repeated failure, and even fatal effects, of St. John Long's applications, many persons long regarded his opinion as oracular, and looked upon his remedies as inestimable discoveries. When I mentioned to the gentleman who brought me a bottle of the liniment that St. John Long himself died of phthisis, and brought this forward as a strong argument against the infallible efficacy of his remedies, he said that this very circumstance was one of the most remarkable proofs of his sagacity, for St. John Long had always maintained that the liniment was not suited to his own case, and that there was something in his constitution which neutralized its good effects; and so it happened, for when he applied the liniment to his skin it did not produce the red spots which usually resulted from its application in other persons. In fact, such was the credulity of St. John Long's patients, that his death passed among them as the strongest proof of the infallibility of his medicines. Indeed he was considered by many of our nobility as a sort of medical martyr, who, having sacrificed life in the accomplishment of his mission, rising from earth, let his mantle fall on the highest bidder!

But to return to our patient. In this case the liniment did a great deal of good, but it was not the only means we employed. We observed that the asthmatic paroxysm came on every night, continued for two or three hours, and then went off with free expectoration and sweating. In order to prevent this, we gave him a draught which he was to take when awakened by the pain and sense of tightness in his chest. He took this, and it had the effect of arresting the paroxysms, so that he no longer found it necessary to leave his bed. That this remedy had succeeded in averting the disease was plain from the following circumstance:—one day the clinical clerk had omitted to repeat his draught, and he consequently got no medicine: on that night the asthmatic paroxysm returned and went through its usual course as before. This draught was very simple, being composed of half a drachm of tincture of hyoscyamus, half a drachm of vinegar of squills, and the same quantity of ipecacuanha wine in an ounce of camphor mixture. It is scarcely necessary for me to explain the intention of the ingredients. The tincture of hyoscyamus possesses narcotic and anti-spasmodic properties, and ipecacuanha and squill are known to have great efficacy in disease of the bronchial mucous membrane, being both promoters of expectoration, and the latter also acting on the urinary organs. Without, however, attempting to explain the precise mode in which each of these ingredients acted, it will be sufficient to state that the combination had a beneficial effect, and checked the asthmatic paroxysms. We persevered in using it, as well as the liniment, until all tendency to asthma had disappeared, and the normal state of the function of respiration became perfectly re-established.

Permit me, gentlemen, to make a few observations here on the chief symptom of diseases of the lungs, or what is popularly termed cough. What is cough? A sudden and violent expulsion of air from the lungs, produced by forcible contraction of the diaphragm, aided by the abdominal and other expiratory muscles. What is the cause of cough? Pulmonary irritation. What is the nature of this pulmonary irritation?

Here, gentlemen, is a question which every practitioner should put to himself when called on to treat a case of cough, and what affection is there which so frequently demands our assistance, and tasks our ingenuity? How abundant, how varied are the examples of cough we meet with in our daily practice! How obscure do we not find its nature on many occasions, and how difficult and perplexing its treatment! When the source of irritation is manifest, where the nature of the disease is simple and easily detected, where, after a proper examination we can point to some part of the respiratory system and say, here is the seat of the disease; in such cases, indeed, our course is sufficiently clear; we may proceed with confidence, and practise with success. But how often are we, after weeks and even months of close and painful attention, baffled in our best-directed efforts, and forced to admit the humbling conviction that all our remedies are inefficient and useless, and that our character, as well as that of the profession, is likely to suffer in public estimation! How often, too, do we discover with surprise, that the cough which he had been treating for weeks as a pure pulmonary affection, depends not on any primary derangement of the respiratory system itself, but upon the irritation of some distant organ, or upon peculiar conditions of the whole economy.

Before I proceed to inquire into the nature of the various sources of pulmonary irritation producing cough, I wish to remark that the exciting cause, or, in other words, that which immediately precedes and seems to give rise to a tendency to cough, is a sensation of tickling in the mucous membrane of the trachea, close to its bifurcation, and opposite the hollow at the fore part of the neck. It is also a curious fact, that this sensation of tickling or itching is peculiar to this situation, being never felt in any other part of the pulmonary mucous system. Whether the disease be seated above, as in case of laryngeal affections, or whether it be below, as in case of disease of the lining membrane, or parenchyma of the lung, *it is here alone that the tickling sensation is felt.*

Another circumstance equally remarkable, and equally difficult of explanation, is the effect of position in cough. Persons labouring under slight bronchitis, or rather slight inflammation of the trachea, who scarcely cough half a dozen times in the course of the day, will, the moment they lie down at night, be seized with a violent and harassing cough, which may last for several minutes, and sometimes for hours, with little intermission. We can easily understand why empyema or pneumonia of one side of the chest may produce cough in certain positions and not in others, for here we have an obvious physical cause: the accumulated fluid in the pleural cavity in the one case, and the diseased lung, whose specific gravity has been much increased by solidification, in the other, exercise an inconvenient degree of pressure on the sound lung, and hence give rise to irritation and cough, particularly in those positions which favour the operation of such physical causes of irritation.

Here, however, the cause of irritation is very obscure. It may (but this I merely offer as an hypothesis) depend on the fluid secreted by the mucous membrane trickling over that part of the trachea where the tickling sensation is felt, the flow of mucus to this part being favoured by the recumbent position. That it does not depend on any supposed temporary congestion and irritation of the lung, from the impression made on the skin by cold bed-clothes, I am quite convinced, for I have repeatedly observed it in persons warmly dressed, from merely lying down on a sofa close to the fire. You will, therefore, bear in mind, gentlemen, that although usually, when coughing is induced by any sudden change of position, we may infer that it is connected with some serious lesion of the lungs or pleura, yet we must not attach too much importance to this symptom, for cases are occasionally met with, in which mere tracheal or bronchial inflammation is attended with the same symptom to a very remarkable degree.

I may observe, *en passant*, that the sensation of tickling or itching appears to be almost exclusively confined to the skin. Here it appears to be dependent on slight causes, apparently incapable of producing that modification of nervous sensation termed pain. In other cases it seems to be connected with the rise and decline of the phenomena, which indicate inflammatory action, arising, in the first case (where it is generally less observable) from that nervous modification which precedes inflammation; and, in the second, being connected with some change in the nerves of the part which announces its return to a healthy condition. It does not appear to affect the mucous tissues, except in a slight degree and under peculiar circumstances. It is not observed in the pulmonary mucous tissue, except at that part of the trachea which I have already mentioned, and it does not occur in any part of the intestinal mucous membrane. The only parts connected with the intestinal tube in which it is felt, are the nose and the anus, and here it is within the reach of scratching, the ordinary mode of relief. This is a fortunate circumstance, gentlemen, for if any part of our bowels were to itch as your skin sometimes does, the annoyance would be quite intolerable. If the presence of lumbrici in the small intestines, instead of producing a troublesome itching of the nose—if it produced, I say, a degree of itching equally intense in the mucous membrane of the bowels and stomach, what patient could endure greater torments than a person so afflicted? If ascarides gave rise to as intense a degree of itching within the colon as they occasion at the verge of the anus, how dreadful would be the sufferings thus endured!

Passing over the obvious and well-known sources of pulmonary irritation, producing cough, such as bronchitis, pneumonia, &c., the first cause to which I shall direct your attention is one of not unfrequent occurrence, and where a mistake in diagnosis may lead to a practice useless to the patient and discreditable to the practitioner. The best mode of illustrating this is by giving a brief detail of a case which I attended with Dr. Shekleton. A young lady, residing in the neighbourhood of Dorset Street, was attacked with symptoms of violent and alarming bronchitis. The fits of coughing went on for several hours with extraordinary intensity; the cough was dry, extremely loud, hollow, and repeated every five or six seconds, night and day, when she was asleep as well as when she was awake. Its violence was such that it threatened, to use a vulgar but expressive phrase, to tear her chest in pieces, and all her friends wondered how her frame could withstand so constant and so terrible an agitation; and yet she fell not away proportionally in flesh, had no fever, and her chest exhibited nothing beyond the rales usually attendant on dry bronchitis.

She was bled, leeched, blistered, and got the tartar-emetic mixture, but without experiencing the least relief. We next tried anti-spasmodics, varying and combining them in every way our ingenuity could suggest; still no change. We next had recourse to every species of narcotic, exhibiting in turn the different preparations of conium, hyoscyamus, opium, and prussic acid, but without the slightest benefit. Foiled in all our attempts, we gave up the case in despair, and discontinued our visits. Meeting Dr. Shekleton some time afterwards, I inquired after our patient, and was surprised to hear that she was quite recovered and in the enjoyment of excellent health. *She had been cured all at once by an old woman.* This veteran practitioner, a servant in the family, suggested the exhibition of a large dose of oil of turpentine, with castor oil, for the purpose of relieving a sudden attack of colic ; two or three hours afterwards the young lady passed a large mass of tape-worm, and from that moment every symptom of pulmonary irritation disappeared.

The next kind of cough, in which the cause of pulmonary irritation is often misunderstood, is that which occurs in hysteric females. This cough constitutes one of the most alarming diseases in appearance you can possibly witness ; in some, it is loud, ringing, incessant, and so intensely violent, that one wonders how the air-cells or blood-vessels escape being ruptured. In others, it is quite as incessant, occurring every two or three seconds, night and day, but is not very loud, and, indeed, in some it scarcely amounts to more than a constant teazing hem ; in general the pulse is quick, but it is the quick pulse of hysteria, not of inflammation or fever. The patient suffers no aggravation of the cough from inspiring deeply, and her countenance exhibits no proof of mal-aëration of the blood ; on the contrary, it is blanched and pallid. She complains of variable or deficient appetite, headache, cold feet, and irregular or absent catamenia, and notwithstanding the cough continues for weeks or even months, she does not become emaciated like a person in incipient phthisis, although so much disturbed by the cough, and subsisting on so small a quantity of food.

Here the history of the case, a knowledge of the patient's habits, and the use of the stethoscope, are of great value. You will find that the patient is subject to hysteria, that she is generally pale and of a nervous habit, that the attack came on suddenly, and was superinduced by mental emotion, or some cause acting on the nervous system, or else arose gradually as one of the sequelæ of catamenial disturbance ; that the heat of skin and state of pulse are by no means proportioned to the violence of the symptoms, and the stethoscope will tell you that the signs of organic derangement of the lung are absent. You will thus be enabled to arrive at an accurate notion of the nature of the disease, and you will save the patient from the useless and often dangerous employment of antiphlogistic means. Bleeding and leeching are, generally speaking, injurious; such cases are best treated by stimulants, anti-spasmodics, and stimulant purgatives, together with change of air, travelling, and the use of chalybeate spa waters.

The third species of obscure cough to which I shall direct your attention is one of deep importance for many reasons. It is that species of cough which depends upon pulmonary irritation connected with a venereal taint in the system. That syphilis may attack the pulmonary as well as the cutaneous, osseous, mucous, and other tissues, is not a discovery of modern times; it is a form of the disease long known, and you will find it mentioned by many of the old writers.[*] Since syphilis has been classed by Willan and others among diseases of the skin, this notion seems to have been either abandoned or forgotten, but, as it strikes me, with very little justice. I entertain a firm conviction that syphilis may affect the pulmonary as well as it does the cutaneous, or mucous, or osseous tissues, and that a patient, labouring under a venereal taint, may have irritation from this cause set up in the lung as well as in any of those organs in which it is usually manifested.

The first person who mentioned this circumstance to me was the late Mr. Hewson, and since that time I have had repeated opportunities of confirming the truth of his opinion. Richter, Alibert, and Paget have well observed, that Willan and Bateman's classification of diseases of the skin is liable to the paramount objection, that it has no reference to the constitutional origin of cutaneous affections. I have the very same fault to find with modern treatises on diseases of the lungs. Pathologists have indeed inquired most accurately into the numerous morbid changes to which the pulmonary tissue is subject, but they have omitted a no less important part of their task, which is to investigate the states of constitution which originated these changes. The agency, indeed, of scrofula has been investigated with care, but how little attention has been paid to rheumatism, gout, syphilis, and scurvy, the fruitful sources of numerous diseases of the chest.

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[*] The Germans were also aware of this circumstance. "Auch das Quecksilber hat die Empfehlungen einiger Aertze, und noch neulich Hecker's erhalten. Demungeachtet passt es als ein stark Oxydirendes Mittel in der Lungens schwindsucht nicht, am wenigsten in der Phthisis pulmonalis ulcerosa. Hochstens kann es seinen Platz in der Phthisis tuberculosa finden, wo diese namlich scrophulosen oder syphilitischen Ursprung ist, jedoch auch hier nur in Anfange der krankheit, und stets nur in Verbindung mit dem opium und dem Hyosciamus."—*Ueber die Erkenntniss und Cur der Chronischen Krankheiten des Menschlichen Organismus*, von Dr. Wilhelm Andreas Haase.

By far the most interesting point connected with this affection is its diagnosis; on this everything depends. The great importance attached to the diagnosis arises from the circumstance of this disease presenting symptoms analogous to, and consequently frequently confounded with phthisis. A patient comes to consult you for cough; you find him pale, emaciated, and feeble; he sleeps badly, and is feverish at night, and has a tendency to sweat. Here there may be a double source of error. If the disease be mistaken for tubercle, and mercury not given, bad consequences will result; on the other hand, if tubercles be present, the effect of administering mercury may be to precipitate the disease to a fatal issue.

What is the nature of this disease, and how are you to recognize it? Mainly, I answer, by the history of the disease. If the patient's sufferings have commenced at that period of time, after primary sores on the genitals, when secondary symptoms usually make their appearance; if some of his complaints are clearly traceable to this source; if along with debility, night-sweats, emaciation, nervous irritability, and broken rest at night, we find cough; and if this group of symptoms is associated with others, evidently syphilitic—such as periostitis, sore throat, and eruption on the skin—then we may with confidence refer all to the same origin, and may look upon the patient as labouring under a syphilitic cachexy, affecting the lungs as well as other parts.

In forming this diagnosis much caution and care are necessary, and we must not draw our conclusion until we have repeatedly examined the chest by means of auscultation and percussion; if these fail to detect any tangible signs of tubercles, or if we discover only a trifling amount of disease in the lungs, whilst the constitutional symptoms are those that usually attend the advanced stages of phthisis, we may then proceed to act upon our decision, and may advise a sufficient but cautious use of mercury. Under such circumstances, it is most pleasing to observe the speedy improvement in the patient's looks and symptoms; the fever, night-sweats, and watchfulness diminish; he begins to get flesh and strength, and, with the symptoms of lues, the cough and pectoral affection disappear. I am not prepared to say which of the pulmonary tissues is most usually attacked by the venereal poison, but I believe that it chiefly tends to the bronchial mucous membrane, although, like other animal poisons—for example, those of measles and scarlatina—it may also occasionally produce pneumonia.

I cannot forbear reading for you here a passage from Dr. Stokes' valuable work on *Diseases of the Chest,* in confirmation of the views I have now advanced:—"My friend Dr. Byrne, whose situation as a medical officer to the Lock Hospital gives him the greatest opportunities of observation, informs me that he has, in many instances, seen patients who had been formerly diseased, and who had come into hospital either for new sores or for gonorrhœa, attacked with intense bronchitis and fever. This attack would come on suddenly, and the distress was so great that bleeding had to be performed, the effect of which was that soon after a copious eruption, often combining the lichenous and squamous forms, made its appearance with complete relief of the chest. In some of these patients, on the day before the eruption, the stethoscopic signs had been those of the most intense mucous irritation; and yet, when the skin disease appeared, *the respiration became either perfectly pure* or only mixed with an occasional ronchus in the large tubes. The same gentleman has observed the reverse of this, as when a syphilitic eruption has been repressed, the bronchial membrane has become much engaged, and the patient affected with general febrile symptoms. These phenomena subsided after bleeding and mild diaphoretics, which had the effect of restoring the cutaneous eruption. Here we have an additional evidence in favour of the analogy between this syphilitic bronchitis and that of the exanthema."

The fourth species of obscure pulmonary irritation producing cough is that which is connected with a gouty diathesis. Gout may attack almost every tissue in the body. We may have it in the joints, as you are all well aware; we may have it in the muscles and muscular aponeuroses, forming what has been termed rheumatic gout; it occurs frequently in the fibrous tissues, and I have several times observed it in the areolar substance of various parts of the body, forming either diffuse œdema or tumors, which are exceedingly tender to the touch, and are removed by treatment calculated to relieve the constitutional affection. It may attack the heart, giving rise to true pericarditis, or else to a functional disease with palpitations—a sensation of fluttering and sinking about that organ, and very remarkable intermission of the pulse; or it may affect the stomach, occasioning dangerous spasms or various dyspeptic symptoms; or it may seize on the intestines, producing irritation, colic, and gouty diarrhœa.

I remember a patient, of a confirmed gouty habit, expressing a great deal of surprise at getting an attack of gout in the testicle, for he could not conceive how a disease which generally affects the joints could occur in an organ so different in its nature. I replied that it could easily be explained; because fibrous tissue, which gout most frequently attacks, enters into the composition of the testicle as well as that of the joints. Indeed the testicle, with reference to the texture of its envelopes and the extent of motion it enjoys, may be said to be provided with a sac-like joint.

In like manner, gout very frequently attacks the mucous membrane of the trachea or bronchial tubes, causing a dry, annoying, and often a very obstinate cough. Where this cough comes on along with the fit of inflammation of the joints, its true nature is frequently overlooked, and it is believed to have originated in cold, and to be mere common bronchitis. No matter what be the cause of inflammation in a gouty habit—no matter what the organ attacked by the inflammation be—it almost invariably assumes the character of true gouty inflammation. If a gouty person sprains a toe or an ankle, matters, after progressing for a time in the ordinary way, are sure in the end to exhibit a change of character; and the inflamed parts are observed either to grow unexpectedly worse, or to become stationary, at a time when a speedy termination of the local affection seemed approaching. This is owing to its being now modified by the constitutional tendency to gout, which localizes itself in the affected part. Precisely the same relations may be often observed between common bronchitis, produced by cold in a gouty habit, and the gouty bronchitis it indirectly produces. Gouty bronchitis often becomes chronic, continuing until it is relieved by a regular fit of gout in the extremities.

The fifth species of pulmonary irritation, in which the source of the disease is more or less obscure, is that which is connected with the scorbutic diathesis. It is important to be aware of this, particularly for those who have charge of the health of the poorer classes, which is almost of more value than that of the rich, for on it their labour and their means of support depend. Among the poor, particularly in cities where the majority live on provisions not sufficiently nutritious, the scorbutic diathesis is very prevalent. It manifests itself either in the form of purpura, or in tendencies to hemorrhage from the nose, stomach, bowels, or bladder. It sometimes attacks the lungs, producing irritation of the bronchial mucous membrane, with cough and spitting of blood, and occasionally gives rise to pulmonary apoplexy. It is evident that pulmonic cases of this nature, originating in a scorbutic diathesis produced by confined air, damp lodging, and insufficient diet, will require a treatment peculiar to themselves, both during the attack and during convalescence.

The last source of pulmonary irritation to which I shall direct your attention, is that which proceeds from scrofula. You all know that scrofula has a tendency to attack every tissue in the body, but you may not perhaps be aware that it may affect those tissues in very different ways, and that scrofulous irritation may manifest itself in various forms, from the most trifling and transitory to the most extensive and permanent. I recollect a case I attended with Dr. Jacob, in which this fact struck me very forcibly. A fine boy, of high complexion, precocious intellect, and other marks of the scrofulous diathesis, got an attack of scrofulous ophthalmia of an intense character, and it required all the skill and ingenuity of Dr. Jacob to save him from blindness.

During the period of our attendance, his brother (who was also of a strumous habit) began to complain of parts of his arm being sometimes a little sore. This circumstance attracted my attention, and on examination I found that several circular diffused swellings of various sizes, often equalling half a crown in diameter, had successively appeared on different parts of his extremities and body. They evidently depended on inflammation of the subcutaneous areolar tissue, and exhibited a remarkable example of a most transitory local affection, produced by a constitutional cause—for these swellings arose, arrived at their acme, and subsided in the space of ten or twelve hours: they constituted, in truth, the first efforts of the scrofulous diathesis to localize itself, and, after a few weeks continuance, they were replaced by distinct and *fixed* scrofulous inflammation of the metatarsal bones.

Here was a very curious and instructive fact. A boy, evidently of a scrofulous diathesis, has circumscribed tumors, which arise, come to maturity, and subside in the course of a few hours. In some weeks afterwards, scrofulous irritation, in a decided and permanent form, fixes itself in the foot, producing inflammation and ulceration. From this it may be inferred that scrofula (for in this case I am firmly convinced these tumors were connected with a strumous diathesis) may attack parts not only in its more permanent and destructive forms, but also in a manner so trifling and so transitory as to subside in a few hours, and leave no trace of its existence. The inferences deducible from this fact are numerous and important; for if the scrofula may thus produce an acute and transitory inflammation of the subcutaneous areolar tissue, surely it may occasionally give rise to somewhat similar affections of internal organs—as the bowels, the lungs, &c.—and thus may occasion an acute bronchitis, a pneumonia, or an inflammation of the mucous membrane of the intestines, totally independent of the operation of cold, or the usual causes of such affections. It has been too much the custom to refer chronic and fixed local inflammations to the agency of constitutional causes only. The example before us proves that even the most transitory may have this origin.

Scrofulous irritation may affect either the lining membrane or the parenchyma of the lung—giving rise in the one case to scrofulous bronchitis, in the other to scrofulous pneumonia—two affections which may exist separately or combined, and either of which may prove fatal, with or without the development of tubercles in the lungs.

Before concluding, I wish to make a few observations on the use of decoction of sarsaparilla and nitric acid in certain cases of chronic cough. The utility of this combination has been long recognized in cachectic states of the system and affections of the skin, whether syphilitic or mercurial; and it has also proved very efficacious in various species of sore throat, chronic pains, and other textural derangements of a slow and tedious character.

The marked effects which the decoction of sarsaparilla and nitric acid produces in these diseases of the general habit, skin, and mucous membrane of the throat, led me to infer that the same combination might be employed with advantage in cases of chronic cough, attended with redness and relaxation of the mucous membrane of the fauces, elongation of the uvula, and some degree of general debility.

I have observed that such cases are almost invariably accompanied by more or less derangement of the digestive organs and an irritable state of the general system; and from their analogy to other states of the constitution, in which nitric acid and sarsaparilla have proved extremely beneficial, I was induced to give this combination a trial; and I can now state that it has not disappointed my expectations. Decoction of sarsaparilla, given in doses of a pint daily, with a drachm or more of nitric acid, has proved a most useful and valuable remedy in the treatment of cases of this description. It is scarcely necessary to observe that, in addition to the use of this remedy, change of air, moderate exercise and recreation, and a nutritious but not heating diet, are required. In some of these cases it will be also necessary to apply lotions of the nitrate of silver or sulphate of copper to the fauces and tonsils: where the uvula is greatly relaxed, it will require to be frequently touched by the nitrate of silver, or even to be shortened by an operation.

Guided by the same principles, I have frequently exhibited decoction of sarsaparilla with nitric acid in cases of persons of a reduced and relaxed habit, who are troubled with a slight but frequently recurring cough or hem, and the expectoration of a few bronchial sputa, occasionally mixed with blood, which appears to come, not from the lungs, but from the eroded mucous membrane at the top of the pharynx and larynx. In such cases I have observed, that the cough and expectoration took place chiefly in the morning after awaking, and in some had continued for weeks without any dyspnœa, pain in the chest, or fever. I may also remark, that the same combination may be often given with advantage to patients whose mouths have been recently made sore by mercury administered for the cure of bronchitis, or pneumonia, and will occasionally be found useful in removing the still lingering remnant of pulmonary disease, at a time when mercury could not be pushed farther with safety.

LECTURE XLI.

PNEUMONIA.—PLEURO-PNEUMONIA.—ABSCESS OF THE LUNG.

As I am about to offer you some clinical observations on pneumonia, it may be necessary to make a few remarks on some points connected with the symptoms of the disease. And, first, with respect to the expectoration. With the characters of true pneumonic sputa I suppose you are sufficiently acquainted; you had many opportunities of examining the expectoration of a patient who died lately of gangrene of the lung, and to whom I shall again refer: at the time he was labouring under acute pneumonia, and while hepatization was still going on.

Dr. Stokes does not consider the character of the sputa of much value in pneumonia. He says, "Although the sanguinolent and viscid character of the expectorated mucus is observed in many cases of pneumonia, yet it is anything but constant. In fact, pneumonia may occur with all varieties of expectoration, from a scanty and colourless mucus, to the most different characters of secretion. It often occurs without any characteristic expectoration, and may thus pass even to its advanced stages. Generally speaking, it may be said that the *crachats rouillés* of the French are found in the more active cases of pneumonia, which occur in robust habits; but I am convinced that in a large proportion of the hospital patients, in whom the disease occurs in feeble constitutions, in the child, or as a complication or sequel to fever, the appearance of the sputa has little value."—*Treatise on Diseases of the Chest*, page 320.

But I wish to observe—and I beg you will impress this on your minds—that *there may be cases of extensive pneumonia without any expectoration from the commencement of the disease to the period of complete resolution.* A case occurred in this hospital, of a young woman named Mary Nowlan, who had half one lung and the lower third of the other hepatized during a severe attack of pneumonia, and yet it was not accompanied at its commencement by expectoration; there was no expectoration during its continuance, and resolution went on, and the lung was restored to its healthy condition without any expectoration. She remained in the hospital for two months, the lung being extensively engaged; and during this time she was carefully watched, but we never could discover anything like sputa from the beginning to the end of the disease. We have lately had under our observation a case of pneumonia after measles, in which a similar absence of the expectoration was observed. This is a very singular but instructive case.

Another fact with regard to expectoration. A man may get an attack of pneumonia, and, in consequence of the rush of blood which accompanies the first access of inflammatory action in the lung, may have at the beginning some bloody expectoration, but after a day or two this subsides, and though the lung is considerably affected, the patient may not have any expectoration whatever throughout the whole course of the disease up to the period of total resolution. I have seen this occurrence most distinctly marked in a case which I attended with Sir Henry Marsh. A gentleman who had got an attack of acute pneumonia, had bloody expectoration for the first and second day, but on the third, when I saw him, it had ceased, and all expectoration continued absent for five weeks, at the end of which he completely recovered. He was an intelligent and scientific man—knew well what was the matter with him, and entertained the old notion that all inflammatory affections of the lungs resolve themselves by expectoration. Hence he looked day and night for its occurrence with considerable anxiety, but not the least sign of sputa appeared. In this case the hepatization, which was very extensive, became completely resolved in the course of five weeks, and yet it is a singular fact that there was no expectoration whatever, from the commencement of resolution to its termination.

Hence you may perceive, that in pneumonia the sputa may be absent from the beginning to the end of the disease; and that although the hepatization may be very extensive, still resolution will occur without the slightest expectoration. Again, inflammation may attack a considerable portion of the lung, and the patient may have bloody expectoration for the first two or three days, or during the stage of congestion; this may cease altogether, and the patient have no sign of sputa of any description up to the period of complete resolution. These are, no doubt, rare exceptions to the general law which regulates the course of pneumonic inflammation, in which we have sputa of one kind or other at every period of the disease; but they possess a considerable degree of interest, and it is of some importance to be acquainted with them.

There is another observation which I wish to make here. The lung becomes attacked by inflammation, this goes on to hepatization, that is, a certain portion of the pulmonary tissue which had been before pervious, becomes impervious; instead of being a soft, elastic, crepitating, sponge-like body, it becomes solid, inelastic, and very like that organ from which this condition derives its name, the liver. One of the most curious things, the knowledge of which we have arrived at by the discovery of the stethoscope, is that not only small, but even very extensive portions of the lung may become thus solidified and altered in their texture, so that a return to the normal condition would seem almost impossible, and yet we know that a person may have nearly two-thirds of one lung reduced to this state of solidification, and still become afterwards as healthy as ever.

Now, if you read Laennec's admirable remarks on pneumonia and other treatises on the same subject, you will find that the circumstances which indicate the resolution of pneumonia, are sputa of a certain character, and the reappearance of crepitus. I need not repeat here what I suppose you are all aware of, that crepitus commences before hepatization, ceases on its appearance, and returns again when resolution takes place. The latter kind is what has been termed by Laennec *crepitus redux*. The crepitus of resolution differs, however, from that heard in the earlier stages, in these particulars, viz., its bubbles are much larger and moister, and it can be heard during the whole of the inspiration, and in a diminished degree during expiration. But in the other case the first part of the inspiration is pure, and the rale only appears at the termination of the effort, and is of an exceedingly fine and dry character. Nature accomplishes the resolution of pneumonia not only by absorption of those particles which the process of morbid action has deposited in the tissue of the lung, but by secretion into the air-cells and minute bronchial tubes, and it is the presence of this secretion which gives rise to the crepitus redux. Now the observations which I have made with respect to the total absence of expectoration in some cases of pneumonia, apply here also; for where all sputa are absent, where there is no expectoration from the beginning to the end of the disease, you can have no crepitus redux.

The fact which I wish to impress on your attention is that in some cases of pneumonia, expectoration may be completely absent; here the crepitus redux is never heard. Thus, in the case of Mary Nowlan, resolution went on to the re-establishment of the healthy and normal condition of the lung, without the slightest crepitus being heard. It is not necessary for the resolution of hepatization that there should be increased excretion into the bronchial tubes during the time nature is employed in absorbing the matter deposited in the lung. In the ordinary way it is removed partly by absorption and partly by excretion into the bronchial tubes. Sometimes, however, interstitial absorption alone seems to be sufficient for this purpose, and the cases I have mentioned prove that it is in the power of nature to remove the morbid product in this way, without calling in the aid of the bronchial tubes. I may, however, remark that such cases are rare, and that resolution proceeds much more slowly than where free expectoration is present.

Let me now direct your attention to another topic. You have seen that a principal feature in the character of the present pneumonia is its complication with pleuritis; we have had several cases of inflammation of the lungs, combined with inflammation of their investing membranes, but I do not recollect that we have had a single case of pure pleuritis, or pure pneumonia. In the patient who lies at present in the chronic ward, labouring under pleuro-pneumonia, the inflammation occupied the superior part of the right lung in the first instance, and this is rather remarkable, as pneumonia generally commences in the lower part of the lung. Here, however, the pneumonia and pleuritis were located above, each being in point of extent nearly of the same dimensions, the portion of inflamed lung corresponding in its area to the portion of pleura engaged in the disease. Soon after his admission we found that the inflammation was making further progress, but its spreading was attended with this remarkable peculiarity, that while the pleuritic inflammation in the superior part of the right side of the chest became limited, and ceased to extend itself, the pneumonic inflammation commenced travelling downwards and backwards, so that after two or three days we had pleuro-pneumonia in the upper part of the lung, and further down, in the lower and back part of the lung it was merely pneumonia unaccompanied by pleuritis.

This is an occurrence which I have frequently witnessed, that when pleuritis and pneumonia co-exist, the latter will spread, often in spite of all our efforts, while the former remains stationary. I wish to impress this fact on your minds that pleuritis never exhibits such a tendency to extend itself gradually, day after day, as pneumonia; if the pleura becomes inflamed, the extent to which it is likely to be engaged will be determined in twenty-four hours; whereas, in cases of pneumonia, the disease, though limited at the commencement to one or two small insulated spots, will frequently begin to extend in every direction from these points, until in the course of a few days it involves a large portion of the lung. In other cases, many days are required before the spreading of pneumonia ceases.

This case is of considerable interest to the stethoscopic student, as exhibiting in a very satisfactory manner all the physical signs of pneumonia, as well in its pure state as where it is complicated with pleuritis. It is unnecessary for me to enter into any detail of the symptoms, or of the physical signs, but I invite you to study them as well worthy your attention.

A patient has recently died, who came into hospital labouring under a disease which generally proves fatal, namely, double pleuro-pneumonia. He had violent pleuritis and pneumonia in both sides of the chest, under these peculiar circumstances: that in the left side the pneumonia was situated above and anteriorly, in the right side below and posteriorly; so that the lungs were affected nearly at the opposite ends of their transverse diameters. On his admission, he appeared extremely low and weak, and it was obvious that the case must terminate fatally. His respiration was extremely quick and laboured; he had great oppression about the chest, constant anxiety, incessant harassing cough, quick, weak pulse, and a countenance expressive of intense suffering. On examining the chest with the stethoscope we found that both lungs were extensively solidified; and this, combined with his age, and the manifest sinking of the powers of life, prevented us from indulging in any hope of being able to arrest, much less to remove, his complaint. He was a poor creature, moving in the very lowest class of life, ill fed, without sufficient clothing, most wretchedly lodged, and constantly exposed to cold and hardship. He had been employed in breaking stones on a road at fourpence per day, and out of this miserable pittance endeavoured to maintain a family. From repeated exposure to inclement weather, he got a violent attack of pleuro-pneumonia, which, being neglected at the commencement, assumed an intractable character, and when he came into hospital the disease had been of several weeks' standing, his system reduced to the lowest state, and no sign whatever of reaction.

In estimating the danger of a patient labouring under pneumonia, it is not so much in proportion to the extent of lung engaged, as to the quickness of respiration, and the presence or absence of symptoms of asphyxia. You will see one man in pneumonia, having nearly the whole right or left lung inflamed and solidified, breathing easily with the other lung, and apparently suffering but little inconvenience; while you will find others, with a smaller amount of disease, exhibiting symptoms of distress bordering on asphyxia.

I attended a young gentleman eighteen months ago, who had complete carnification of the left lung, and pleuritic effusion on the same side, pushing the heart so far out of its place, that it could be felt pulsating under the right mamma. His illness lasted for nearly four months; yet the fluid was afterwards completely absorbed, the lung gradually assumed its natural condition, and he recovered perfectly. About six months after, I was again called to see him, and found that after exposure to cold he had got a violent attack of pneumonia in the right lung, which had run on to hepatization, and on examining him by the stethoscope and percussion, I found that almost the whole of the lung was solidified. In this case, there never was anything like an approach to asphyxia; indeed, the distress of breathing was extremely slight, and he recovered completely in two months.

This was rather a singular case; the patient one year getting violent pleuritis, followed by extensive effusion, forcibly compressing the lung so as to render it quite useless, and pushing the heart out of its place; and the next year getting an attack of pneumonia in the other lung, ending in solidification of nearly the whole organ, and yet recovering completely from both. I need not say that there could have been no scrofulous taint in this gentleman's constitution, for if there had, the chances were that he would have sunk under either of these attacks. He lives at Crumlin; and in both instances his attending physician was Dr. Adams, of Stephen's Green.

In such a case as this, the utility of the stethoscope was obvious; by its means we not only learned the nature and extent of the disease we had to combat, but also the exact situation where topical applications, such as leeches, blisters, setons, &c., should be applied with greatest advantage. I had lately an opportunity of witnessing an extremely interesting case of perfectly latent pleurisy. It was seen in the first instance by my former pupil, Mr. B. Guinness. A fine young gentleman, catching cold, contracted some slight fever apparently catarrhal, which altogether subsided in five or six days, but he remained very weak. I saw him on the tenth day; a very slight cough remained, his breathing was regular, and he felt no want of breath; he had no pain in the side from the commencement; he was weak and rather sleepless, otherwise he could specify no complaint. I do not know what induced me to percuss his chest—perhaps it was the force of habit; be this as it may, percussion led me to the discovery of extensive pleuritic effusion on the right side. He recovered perfectly under the use of proper medicines.

In a case which I attended lately with Sir Henry Marsh, I had an opportunity of observing that peculiar throbbing of the chest which so often accompanies pneumonia, and which Laennec considered as caused by the impulse of the heart, transmitted through the hepatized lung. This explanation of the phenomena in question does not appear to me altogether satisfactory. In the first place, the throbbing is too strong to be derived from this source. Thus, in the case of the Rev. Mr. ——, we found that the pulsation was as strong at the right mamma, and even far above it, as it was directly over the heart itself. If the pulsation depended on the stroke of the heart propagated through a solid body, its strength at any other point would be weakened in proportion to the size of that body. It is for this reason that a man bearing a large anvil on his chest scarcely feels the blow when the anvil is struck by a sledge hammer. Now, in the instance before us, the pulsation extended all over the front of the right lung, a great distance in a man with so large a chest, and in most parts was as strong as the pulsation of the heart itself, and therefore the latter could not cause the former by mere propagation through the medium of the hepatized lung.

In the second place, it is not easy to conceive how the impulse of the heart, propagated through the lung, could impart to it not merely motion, but such a motion as everywhere causes a pulsation against the side, that beats distinctly against the end of the stethoscope, lifting up at each stroke the hand or ear of the observer, and imparting distinctly the sensation, that the throbbing is produced by something within, not moving laterally, as the *solidified right lung* would be by the stroke of the heart, but tending with considerable force outwards in every direction, like the pulsation of a subjacent aneurism. In truth, the throbbing adverted to simulated most exactly aneurismal pulsation in every respect, except in being so widely diffused and so nearly equal in force over the whole space it occupied.

By what then was it produced ? To answer this question we must enumerate the physical changes produced by inflammation in the lung. The pulmonary tissue was solid, for neither bronchial respiration nor bronchophony existed, but it was gorged with blood, and instead of its usual light and spongy texture derived from a vast number of cells filled with air, exhibited no doubt that injection and obstruction of all its parts, with a fluid more or less sanguineous, which Bayle and Laennec have termed *engorgement*. While in this soft, engorged, and as it were, semi-fluid state, it is easy to conceive why the lung, connected with the heart by such vast vessels, should pulsate with a strength almost equal to that of aneurism. The brain pulsates notably at each stroke of the heart, and cerebriform and fungoid tumors, on the surface of the limbs and body, have, for this very reason, occasionally a pulsation so strong and distinct, as at times to have deceived the surgeon into the belief of their being aneurismal.

When the lung is solidified, in consequence of the inflammation proceeding still further, and causing hepatization, then each stroke of the heart will be felt and heard over a great extent of surface. This happens, likewise, in cases of tubercular solidification, and has elicited some excellent observations from the late Dr. Townsend; but in neither case would the observer be ever inclined to compare the motion imparted to the parietes of the chest to that caused by the stroke of a subjacent aneurism.

Whenever this pulsation or throbbing of the inflamed lung is observed, it indicates a disease of considerable danger and violence, for the action of the heart is in such cases greatly excited, and is in general extremely difficult to reduce to its natural standard. In some cases of this nature, the action of the heart is sufficient to induce pulsation and throbbing, not merely in the inflamed lung, with which it is directly connected by means of enlarged vessels, but also in the superficial veins of the extremities, an occurrence proving the correctness of the explanation of pulmonary throbbing which I have given. Thus, in the case of a gentleman labouring under pneumonia, attended by Mr. M. Colles and myself, the action of the heart was very powerful, and a *distinct pulsation,* corresponding to each stroke of the left ventricle, was perceptible in all the veins of the back of the head. Sir Philip Crampton witnessed this curious phenomenon.

Another phenomenon, observed in the progress of the foregoing case, strongly attracted the attention of Sir Henry Marsh and myself,—bruit de soufflet, of the most distinct and loudest sort, audible not merely in the region of the heart, but over the entire front of the chest. This *bruit did not exist in the subclavian or carotid arteries;* Sir Henry Marsh, who watched the case with the utmost care, is quite certain that no such sound accompanied the action of the heart in the commencement of the pneumonia; it was not until considerable dulness and disappearance of respiratory murmur over the lower portion of the lung had taken place, that the bruit de soufflet began, increasing in intensity as the inflammation of the right lung spread upwards. This new symptom caused us much uneasiness, and naturally induced the fear that the inflammatory action was not confined to the right lung, but had extended to the heart and great vessels, an occurrence that would have rendered the case almost hopeless. Our fears made us attend to this symptom with the greatest anxiety. For several days it continued without the slightest abatement, but at the period when the stethoscope and general symptoms indicated a notable diminution of the inflammation, then the bruit de soufflet began to diminish in loudness and intensity, and in the course of four days altogether disappeared.

Leaving to others the explanation of so remarkable a symptom, I shall at present merely observe that the occurrence of bruit de soufflet in the heart, in cases of pneumonia, must be rare, for it is not even mentioned by Laennec, one of whose observations indeed seems to imply that such an occurrence was unknown to him, for he says, in speaking of bruit de soufflet in the heart, "on the other hand, we never meet with this sound in direct febrile excitement, unless the individual is at the same time very nervous." Now, in the case before us the bruit was evidently connected, not with the state of the nervous system, but with pneumonic inflammation; for exactly in proportion as that increased or diminished, the intensity of the bruit varied.

I have to make one observation on bleeding in pneumonia. This disease is at present somewhat like an epidemic, for, during the last month, we have had every week four or five cases of genuine pneumonic inflammation. One of these patients has died: he had hepatization of the left lung from top to bottom. We were aware from the beginning that his case was hopeless. In the rest we have been uniformly successful; some are at present recovering, and others have been dismissed cured. We have used the lancet in treating them; but not one of our patients has been blooded largely. In general two venesections, each of twelve ounces, were found sufficient; sometimes the sum of the bleedings amounted to thirty-six ounces; and very rarely have I been ever obliged, in the treatment of pneumonia, to take more than fifty ounces during the whole course of the disease. Bear this in mind, for you will hear many persons maintain that much more copious venesection is necessary. You will hear them boast of having drawn forty, fifty, or even sixty ounces of blood in one or two bleedings. This heroic use of the lancet is generally uncalled for in pneumonia, and argues a want of tact in the practitioner; for were he acquainted with the mode of employing other remedies in this disease, he would not trust solely to venesection. Whatever inconsiderate persons may think, it is of the greatest importance to cure disease with the least possible loss of blood; for you may rely on it, that every ounce of healthy blood you take away is shortly replaced by two ounces very far inferior in quality. Persons much debilitated by disease are in a dangerous state. Protracted convalescence is always unsafe; therefore it is clear that it should be a paramount object of the physician to cure his patients with as little loss of blood as possible.

Recollect, therefore, that you can cure a pneumonic attack by moderate bleeding, and without injuriously weakening the strength of your patient. Far be it from me to decry the use of the lancet, a practice which has the unquestionable sanction of time and experience; but I may be permitted to express my doubts whether pneumonia be a disease which demands the heroic employment of the lancet. I think that a man labouring under severe bronchitis requires nearly twice the sanguineous depletion necessary to subdue a case of genuine pneumonia. You perceived that we have adopted different plans of treatment in pulmonary disease, according to the various circumstances of our patients. We frequently find that inflammation of the lungs may be cut short completely. In the same way bronchitis may be arrested in twenty-four hours. If you happen to visit a case at its very commencement, you have an opportunity of staying its progress; but if this boundary be passed, all you can do is to conduct it safely through its successive phases. A person is admitted into hospital who has been eight days, or perhaps longer, ill; one part of his lung is in a state of active pneumonia, and, in another part, hepatization has taken place. Here you cannot overcome the malady in a day. In this stage you may be obliged to bleed, but you can only bleed in small quantity: you are to have recourse to tartar emetic. Of this I shall say nothing; you all know the treatment, and the rules by which it is to be guided. You are aware that if there be inflammation of the stomach and bowels, you must abstain from the use of this remedy, lest you increase the intestinal symptoms and produce a dangerous effect on these organs. Here you must give calomel. If I were asked, too, what I would prescribe in such cases, where hepatitis was combined with the pulmonary affection, I would say, calomel. Under such circumstances I prefer it to tartar emetic—even though the stomach might be capable of bearing the tartarized antimony; it is a valuable remedy, and its power of arresting inflammation is known and acknowledged. The longer pneumonia has lasted, the less likely we are to derive benefit from tartar emetic, and consequently, in most of the cases which are accompanied by decided hepatization, you observe that we prefer moderate but repeated doses of calomel, until the mouth is distinctly but not severely affected.

The formation of abscess is looked upon very generally as a rather uncommon termination of inflammation of the lungs; and whenever it does occur, it is regarded as a very unfavourable result. The following remarkable cases, however, afford abundant proof that patients may recover, contrary to the usual interpretation of the most significant and decisive stethoscopic symptoms, and therefore deserve your attention in order to warn you from relying too exclusively upon physical phenomena, and too hastily concluding that pulmonary lesions, however extensive, thus indicated, must necessarily prove fatal. These cases, too, show that vast abscesses may be formed in the lungs, and yet the patient recover; and likewise, that real circumscribed abscess occurs more frequently in the pulmonary tissue than Laennec allowed, or his followers seem to believe. It is true, indeed, that where suppuration takes place in the lung, nature effects it in a manner either calculated to afford the readiest exit for the matter so formed, or best suited to promote its absorption.

This object, from the extent of the parenchymatous structure of these organs, and its relation to the air-cells and minute bronchial tubes, is most easily effected, by so disposing of the purulent fluid resulting from inflammation, that it can, on the one hand, be with facility eliminated through the bronchial tubes, or, on the other, absorbed in the texture of the lung itself. In other organs and other parts a similar facility for mechanical elimination does not exist, and consequently the easiest step which nature can take is, to collect the puriform fluid, within the parietes of a circumscribed abscess, which may work its way outwards for the purpose of discharge. From this view it appears that, in other parts, circumscribed abscess is the ordinary means of evacuation provided by nature, and diffuse suppuration the exception; while in the lungs the reverse obtains, diffuse suppuration being the ordinary rule, and circumscribed abscess the exception. The rationale here exposed has been well explained by Dr. Stokes in his admirable treatise on diseases of the lungs, but, at the time he wrote, neither he nor I was aware that large abscesses occur so frequently in the lungs, or are so often recovered from, as subsequent observation has shown to occur.

Case I.—In the year 1837, I was called to visit a boy at Rathmines, who presented the following symptoms: he had for *many weeks* been affected with cough, dyspnœa, and bloody expectoration, attended with fever, emaciation, and colliquative sweats; and when I saw him his pulse was extremely quick, his respiration hurried and difficult, while his whole appearance expressed danger of almost immediate dissolution.

The right side of his chest, but more particularly the superior part below the clavicle, was dull on percussion, and every time he coughed, matter could be heard gurgling in a vast cavity in the upper part of the lung; the gargouillement was so plain as not to require the application of the stethoscope, and indeed it was almost impossible for even the most zealous cultivator of science to examine the physical phenomena very closely, for every time he coughed he threw up large quantities of purulent matter, mixed with blood, of a stench so insufferable that my stomach was nauseated, and I could not remain more than a few minutes in his room, even the most distant parts of which were pervaded by this abominable fœtor. I at once pronounced the case hopeless, and advised merely palliative treatment. In a few months afterwards I was surprised to see the same boy apparently recovered, assisting in carrying on his father's business, that of a tavern-keeper. He has since grown up and become a tolerably strong young man, healthy in every respect, except a certain degree of shortness of breath, which he feels when forced to make any considerable exertion. A manifest flattening is still evident beneath the right clavicle.

Case II.—In the summer of 1839, Sir Philip Crampton brought me to the Shelbourne Hotel, to see a boy about twelve years of age, who had been at school in France, and had caught a cold in the preceding spring, under the effects of which he had ever since laboured. The disease had been but little attended to, and no appropriate treatment employed until emaciation had considerably advanced, and his constitution was evidently sinking under the inroad of the malady. His father was then written to, and he proceeded in haste to the school, where he found that an eminent physician had pronounced the boy's case hopeless, and had declared that he was in the last stage of phthisis. He was brought to Ireland by short stages, and though his removal was accomplished with all due care and circumspection, yet his parent was more than once in a state of well-founded apprehension that he would expire on the road. The disease in this case had been *so long in forming, had advanced so steadily*, and had attained to such a degree of intensity, that little or no hope remained of his recovery. The physical phenomena and the constitutional affection were much the same as those detailed in the preceding case, with the exception that the expectorated pus was neither so abundant nor so fœtid. In both this case and the preceding it is to be remarked that only one lung was affected. His parents were anxious to remove him to the country, and Sir Philip Crampton and I felt much hesitation in sanctioning this step, as the danger of his immediate dissolution was so imminent. His friends, aware of his danger, nevertheless executed their intention; and about five months afterwards I was astonished to learn that the boy had perfectly recovered, and was then engaged in frequently enjoying the diversion of hunting in the county of Tipperary.

In both these young persons, the history of the disease and its unexpected termination prove that they were affected with chronic pneumonia, ending in the formation of vast abscesses in the upper portion of the lung, which brought both patients into a state of the greatest jeopardy, but finally yielded to the curative powers of nature.

I do not see how, in either, a physician was to distinguish them from tubercular abscess. Had the disease in either been more acute, the diagnosis might have been possible; but in both its progress was at first insidious, occupying many months previous to the formation of the cavities, and accompanied by gradually increasing constitutional symptoms and hectic fever. The mere freedom of one lung from disease does not constitute a certain means of diagnosis, for the same not unfrequently obtains in true tubercular phthisis. In such cases it is probable that the microscopical examination of the expectorated fluid would have thrown important light on the subject, and have revealed the true nature of the disease; but it is only lately that investigation has been directed to this promising field of inquiry.

Case III.—Early in the spring of 1841, Dr. Brereton brought me to see, at Sandford, a young boy about fourteen or fifteen years of age, who a fortnight before had been attacked with symptoms of pleuro-pneumonia, intense pain in the side, and cough of a very harassing character; he had also expectorated considerable quantities of the characteristic sputa, tinged of a prune-juice colour. The constitutional symptoms had all along been very severe, and, together with the local inflammation, had not yielded to very active and judicious treatment. For about ten days after my first visit matters went on from bad to worse, and at the end of that time his pulse was about 140; dyspnœa excessive; uneasiness, jactitation, and restlessness; constantly urgent cough both night and day, so that his case appeared utterly hopeless, and his death was hourly expected. The pneumonia occupied nearly the whole of the right lung, and rendered that side almost everywhere dull; and during the first periods of the disease crepitus had been extensively present. While matters thus threatened a speedy and unfavourable termination, he was seized at night with intense difficulty of breathing, anxiety, and pain in his side, and seemed to be moribund. With a sudden effort, however, he succeeded in expectorating a very large quantity of purulent matter, and immediately obtained comparative relief. A similar struggle took place on the following night, and with a similar result, and when I saw him the next morning, I found him in some respects manifestly relieved, but still labouring under great debility, considerable difficulty of breathing, and fever.

On examining the right side of the chest, the whole anterior portion, from immediately below the clavicle downwards, as far as the bottom of lung was found to be morbidly resonant on percussion—a change of a most striking nature, for these parts had been before quite dull. This side of the lung was now evidently dilated, and the stethoscope detected a loud and well-marked metallic tinkling whenever he coughed or spoke. The detection of this phenomenon rendered it certain that a vast abscess existed in the lung, communicating certainly on the one hand with the bronchial tubes, and not improbably on the other with the pleural cavity—a view of the subject which, in my mind, rendered the case hopeless, and I pronounced it to be so. For a fortnight or longer he had occasional returns of sudden purulent expectoration, each time, however, less in quantity, and followed by more marked relief of the constitutional symptoms; and about six weeks from the occurrence of the first expectoration of matter, his convalescence had far advanced, and he is now strong and healthy.

The following cases occurred in the practice of Dr. Stokes :—

CASE IV.—Mr. H., a gentleman aged about twenty-two, was attacked with pain in the side, cough, and fever, and in a short time with very copious purulent expectoration. Soon after this the signs of extensive abscess made their appearance in the antero-superior, lateral, and posterior parts of the lung. The patient was then considered to labour under tubercular caverns to a great extent.

Shortly after, I saw him, when he presented the following symptoms: the whole antero-superior, lateral, and posterior upper part of the left lung sounded extremely dull; perfectly distinct cavernous breathing with large gurgling and pectoriloquy were heard from the second rib downwards to the mamma, and the same phenomena were audible along the fold of the pectoral muscle, from the axilla to the seventh rib. The expectoration was copious, muco-puriform, but not fœtid, and the pulse full, regular, and under 90.

The treatment adopted was palliative; the pulse soon became natural: all hectic fever ceased; the dulness of sound on percussion gradually diminished, and the patient in the course of some months was perfectly restored to health, all the signs of caverns having completely disappeared.

CASE V.—A child, aged twelve years, was attacked with measles, in the course of which severe pulmonary symptoms set in; the measles having subsided, the pulse continued quick, skin hot, and breathing hurried; in about ten days the patient commenced to expectorate a purulent matter of an offensive character. The fœtor of expectoration continued to increase.

I saw the child the third week after the disappearance of measles. The expectoration was copious, of an ash-grey colour, and of a horrible fœtor; in fact, the entire apartment was tainted by the smell; the left lung presented nothing abnormal, nor did the upper lobe of the right: but the whole region of the lower lobe gave a perfectly dull sound on percussion; loud, gurgling, cavernous respiration, almost metallic, with a painfully distinct pectoriloquism.

The patient was ordered a milk diet, tonic medicines, and country air, and recovered perfectly in the course of a few weeks.

CASE VI.—Mr. D., aged about twenty-five, high-shouldered, and with a remarkable stoop, was attacked with cough in the autumn of 1839. His pulse became quick; he lost flesh rapidly, and presented the usual constitutional symptoms of phthisis in an early stage. Within a few weeks of the invasion of the disease, Mr. D. began to expectorate from half an ounce to an ounce daily of a sanious purulent matter, having the colour of urine, but not offensive. He soon came to town; the right clavicle was dull on percussion, the vascular murmur feeble as far as the third rib; above the clavicle most distinct gargouillement existed, and the same could be heard in the acromial region, particularly when he coughed.

Soon after this the pulse became quiet, and the expectoration, though still preserving the above character, diminished in quantity. The patient went to the Cove of Cork, where he remained for the greater part of the winter season. He returned in spring, having become very fat, and without the slightest symptom or physical sign of any pulmonary disease.

I could narrate several instances of pneumonic abscesses similar to those already mentioned, but they seem amply sufficient to prove that the disease is of much more frequent occurrence than is supposed, and is more frequently curable than the serious nature of the lesion would lead us to anticipate.

Some may think that the duration and previous history of the disease may serve to distinguish simple from tubercular abscess of the lungs; but a more accurate examination of facts will show that no reliance is to be placed upon either as a means of diagnosis, for, on the one hand, tubercular abscess sometimes forms in the course of a few weeks from the apparent commencement of phthisis; and, on the other, simple pulmonary abscess is often preceded by inflammation of many months duration, and the origin and progress of the symptoms are, as in Case II., quite identical with those of phthisis.

LECTURE XLII.

GANGRENE OF THE LUNG.—PLEURISY.—ENCEPHALOID CANCER OF THE LUNG.

In continuation of the diseases, gentlemen, which we were last speaking of, let me call your attention to the state of the lungs of a patient who died yesterday in the fever ward, and to whose case I have frequently called your attention. They present some pathological phenomena of considerable interest, and I advise you to examine them carefully after lecture.

The patient, who was advanced in life and of a feeble constitution, had been ill for a week before his admission, with symptoms of dyspnœa, cough, and pain in the left side, which came on shortly after his recovery from an attack of fever. On examining him the morning after his admission, we found the inferior part of the lung dull on percussion, the dulness extending much higher up posteriorly than anteriorly. On applying the stethoscope, we observed that, over a space about the size of two palms, no sound, morbid or otherwise, could be heard; but above the line which bounded this space there were crepitating rales and bronchial respiration. We had, therefore, a two-fold affection of the lung, pleuritis, as indicated by the pain in the side, dulness on percussion, and absence of all sound over a certain portion of the chest; and pneumonia, as indicated by cough and expectoration of viscid sputa, tinged with blood, dulness of sound on percussion, bronchial respiration, and crepitating rales.

It is unnecessary for me to recapitulate all his symptoms, as I have, while visiting the wards, mentioned them in detail, and I shall merely state that our examination showed that this man, in the first place, was labouring under pleuritis, and that it was of that kind which is called dry pleurisy, and where there is no tendency to *considerable* effusion; and, in the next place, that he had pneumonia of the inferior lobe of the left lung, extending up into the middle lobe posteriorly. You recollect that, at the time of our examination, I marked on his skin with a pen the extent of the pleuritic inflammation as well as of the pneumonia, and you will find, by examining this lung, that my diagnosis was correct. You observe the pleura presenting, over its inferior part, laterally and posteriorly, an effusion of lymph, with a very small quantity of sero-purulent fluid; and here is the seat of the pneumonia, which occupied precisely the portion I pointed out, and no more.

With respect to treatment, it was antiphlogistic, pushed as far as the advanced stage of the disease, and the age and debility of the patient permitted. He was leeched and blistered, and this was immediately followed by the use of calomel and opium, and the application of mercurial ointment over the affected portion of the chest. This treatment appeared to check the disease and stop the progress of disorganization in the lung; at least, it certainly arrested the pleuritis. The pulse became more tranquil, and what encouraged us to entertain some slight hopes was, that the difficulty of breathing subsided, and respiration became less frequent, although it was never reduced to anything like the natural standard.

I have already told you, that in studying acute and chronic affections of the chest, the two chief symptoms to be attended to, are the number of respirations which occur in a minute, and the amount of dyspnœa complained of by the patient. Here, though the respiration sank from 40 to 30, still they were nearly double the natural frequency; and this, coupled with the age and debility of the patient, forbade us to hope for a cure. Though the pulse had become more tranquil, and the bloody expectoration had ceased, though dyspnœa was no longer complained of, and the frequency of respiration had become reduced, still the man's countenance exhibited strong marks of suffering and debility, and the stethoscope showed that the disease still continued, and that there was no tendency to resolution in the affected lung.

Here the stethoscope was of great value. A person ignorant of its use, observing the tranquil state of the pulse, the diminution in the frequency of respiration and cessation of dyspnœa, might be led to believe that the man was getting better, and to pronounce that the period of convalescence was near. But the stethoscope told us that the hepatization of the lung was not receding, and when we observed after a week, that it was still undiminished in extent, we were led to form an unfavourable prognosis. We knew that matters could not remain long in this state; we knew that the disorganized lung acted as an irritant tending to keep up disease, and that the man was every moment liable to a new attack of inflammation.

In the meantime the patient caught a fresh cold, from being exposed to the thorough air of our too well ventilated wards. This fell on his larynx, producing hoarseness, stridulous breathing, and copious expectoration. When an old person reduced by some previous disease catches cold, and gets, in consequence, a sudden and remarkable hoarseness, so that he can only speak in whispers; when, in addition to this, he has cough, stridulous breathing, and copious muco-purulent expectoration, you may be sure that the case is a bad one, and the patient in most imminent danger.

Inflammation of the larynx in children is, you all know, a violent disease, it terminates in an effusion of lymph which, if not prevented, or remedied, by the most prompt and decided measures, too often produces fatal obstruction to the entrance of air, and death from asphyxia. In the adult, laryngitis does not, except in a very few instances, cause an effusion of lymph; still it is a severe disease, and well calculated to excite alarm. *In the aged it is accompanied by considerable fever, and what you would suppose likely to give relief, copious expectoration, evidently derived from the larynx itself;—and yet I do not recollect that I have ever seen an attack of this kind that did not terminate fatally.* I have recently visited a case of this description, which occurred in the person of an eminent country practitioner, who had just come to Dublin. He had got an attack of cold followed by hoarseness, which went on for two or three days without being attended to, until one evening he suddenly became alarmingly ill, and was obliged to send for his friend, Dr. Evanson, who prescribed and called on me the next day. I found him labouring under hoarse breathing, constant laryngeal cough, prostration of strength, and enormous muco-purulent expectoration. His pulse was very rapid, he complained much of oppression of the chest, and died the following night, more with symptoms of exhaustion than of asphyxia.

The symptoms of laryngitis, which arose thus suddenly in our patient, were quickly succeeded by others. On Saturday morning we found him much worse, his countenance was sunk and livid, and his breath had become exceedingly fœtid. His expectoration also exhibited a very remarkable change; it was greenish, ichorous, and had a most intolerable fœtor. He now began to manifest symptoms of awful prostration, his distress of respiration became intense, his eyes fixed, his extremities cold, and he expired in about forty hours from the commencement of the attack.

Here, gentlemen, a man after fever gets an attack of pleuropneumonia; this is relieved to a certain extent by treatment, but the hepatization remains unresolved. At the end of three weeks he gets an attack of laryngitis; in addition to this, gangrene seizes on the diseased lung, and he sinks with great rapidity. Where gangrene attacks the limbs it may creep on slowly, and life may be prolonged for a considerable time; but when it fixes on internal organs its course is rapid, and it generally proves fatal in a few days. In the lung, unless the patient's constitution is unimpaired and the disease limited, it will terminate quickly in death, and you have seen that in this case it only lasted from Saturday until Monday morning, that is to say about forty hours. After the acute stage of pneumonia had passed away, as denoted by the absence of the fever and bloody sputa, and the diminution of dyspnœa and frequency of respiration, the case assumes a chronic character, which continues for nearly a fortnight, and then a new order of symptoms appears, manifested by fœtid breath and expectoration, sudden prostration of strength, hippocratic face, and cold extremities. Those who have watched this case must have been struck with these three remarkable stages: the first stage of inflammation, the succeeding one of chronic disease, and the termination in gangrene. It is not usual to find gangrene of the lung supervening on inflammation which has arrived at the chronic stage; it is most commonly the result of acute inflammation of intense character, and comes on at a very early period of the disease.

How are we to account for this sudden supervention of gangrene? There was nothing in the nature of the pneumonic inflammation to dispose it to terminate in this way. It had lasted for three weeks, and had arrived at a stage in which inflammation very rarely assumes the gangrenous character. To what then are we to attribute it? Partly to the debility of the man's constitution, and partly to an erysipelatous tendency in the air which was at the time prevalent. Except there was something to dispose the lungs to gangrenous disease, as an enfeebled habit and vitiated quality of atmosphere, we could not, under the existing circumstances, have expected such a termination. That this view of the subject is correct is shown by the simultaneous occurrence of gangrene in another part, which had not been previously diseased, or subject to inflammation, except shortly before the man's death,—I allude to the larynx. If you examine the larynx, you will find the mucous membrane at the posterior surface, and where it invests the chordæ vocales, destroyed by gangrenous sloughing.

You perceive, then, we had gangrene in the larynx and lung simultaneously. The gangrene of the lung was not therefore attributable to the occurrence of local inflammation having a tendency to gangrene, but dependent upon a constitutional affection produced by debility and a vitiated state of atmosphere. If this man had chanced to get a wound on any part of his body, I have no doubt but that it would have exhibited a gangrenous character, and, in the same way, if he happened to get inflammation of the bowels, it is most probable that this also would have ended in gangrene. I have frequently, in the advanced stage of fever, where the patient is much reduced, and where signs of a morbid condition of the fluids are present, seen gangrene occur simultaneously in various parts of the body. What I wish to impress on you is, that though the inflammation of the lungs ended suddenly in gangrene, it was not in consequence of the inflammation having in itself any such tendency, but in consequence of a change produced in the man's constitution by atmospheric influence, and which was favoured by his advanced age and great debility.

The inference to be drawn from the sudden occurrence of gangrene in this case is, that it does not depend merely on violence or inflammation. At one time pathologists were inclined to believe that gangrene was invariably the result of excessive inflammation, or at least of inflammatory action disproportioned to the vitality of the parts attacked, and that it was possible to prevent any inflammation from ending in gangrene by prompt and active treatment. But there are certain states of the constitution which have a tendency to convert every form of inflammation into gangrene, and that wholly independent of the violence of the local inflammatory action. Thus, a person reduced by fever, small-pox, or malignant scarlatina becomes liable to be attacked with gangrene in various parts of the body from the slightest causes. In all parts which are exposed to any degree of pressure, you will, under such circumstances, have gangrenous sores formed; and even in parts where no degree of pressure has been exercised, sphacelus is not unfrequently produced, as we see in many cases of confluent small-pox, and in the mortification of the pudenda in female children, which sometimes occurs in bad measles. In such instances gangrene is not produced by symptoms of inflammatory action; and, in the present case, it is very probable that no inflammation of the lung, properly so called, preceded the gangrenous affection which terminated life.

A strong illustration of some of the remarks I have now made is furnished by the case of a man named William Deeg, aged 24, who died lately in the clinical ward of Sir Patrick Dun's Hospital, on the 29th day after the first appearance of the eruption of confluent small-pox. It is probable that his illness would have terminated favourably had not extensive gangrene of the sacrum taken place, to which the nurse did not direct my attention until it was of an alarming extent. It was first pointed out to me on the 18th day, at which time he laboured under hoarseness and bronchitic symptoms, unattended with any difficulty of respiration. In the course of a few days, however, dyspnœa came on, the wheezing in his chest increased and seemed to accelerate the period of death, which appeared to all those who had witnessed the progress of the case to be the result of constitutional prostration induced by the external gangrene.

On dissection, two large and two smaller gangrenous sloughs were detected in the right lung. The gangrenous portions of the pulmonary tissue were insulated, being separated from the surrounding substance of the lung by a whitish membrane apparently formed of coagulated lymph: the question here occurs, whether these internal gangrenes were a consequence of the external one, or whether they were the result of the same fatal constitutional derangement that predisposed the external parts to become gangrenous from pressure? The former supposition seems the most probable; at the same time we must admit that gangrene often takes place in fever in external parts not liable to pressure, as, for instance, the soles of the feet. It is to be observed, however, that I never knew such parts to become gangrenous, *except after some other portion of the integument had mortified evidently in consequence of pressure.*

Andral's observations in his *Clinique Médicale,* on the connexion between the state of external and internal parts in fever, and Cruveilhier's remarks on Gangrene of the Lung, are calculated to illustrate this subject still further, and tend to prove that the gangrenous sloughs in this case were not the result of previous inflammation, although nature had excited inflammation in the surrounding pulmonary tissue, in order to form cysts destined to insulate the gangrenous portions.

In connexion with this subject I may observe that I have seen three cases of intolerably fœtid breath and sinking expectoration caused not by pulmonary gangrene, but bronchitis. In all, the sputa were copious, puriform, and evidently bronchitic, and it is very curious that in one man whose body was examined after death, no bad smell was perceptible from any part of the bronchial mucous membrane after it had been cleared of the mucus. The fœtid gas was evidently, therefore, the result of a deranged vital secretion.

I may remark, incidentally, that in Deeg's case the pericardial sac was universally adherent to the heart, and yet the circulation was quite natural, an occurrence long ago observed by Morgagni, and which I have also witnessed in several other cases. Baillie, in his *Morbid Anatomy,* mentions a case in which the pericardium was altogether wanting, but which was probably nothing more than adherent pericardium. These facts are in themselves sufficient to refute that part of Barry's theory, which attaches so much importance to the peculiar mechanism of the pericardial attachment in promoting the circulation. It is rather discreditable to the medical profession, that Barry's theory should have excited so much admiration when first promulgated, as it was formed on principles irreconcilable with well-known hydrostatic laws; accordingly, ever since his work was published, I have never omitted any opportunity in my lectures to demonstrate the glaring errors into which he had fallen, and I am extremely glad that Dr. Arnott, in his Treatise on Physics, has employed the very arguments I had been in the habit of using, and has given Barry's theory its quietus.

Permit me now to direct your attention to the case of a man named T. Kelly, who lies in the upper fever ward, and has been under the care of Mr. Knott. He is at present labouring under an attack of pleuritis and pneumonia, each modifying the other —the pleuritis being here also of that nature which is, by contradistinction, termed dry. A few particulars in this case demand our notice. In the first place, from looking at this man and examining his pulse, you would never suppose that he was labouring under a formidable disease. A careless observer, finding the pulse to be soft, regular, and only 72 in a minute, that respiration was tolerably free, and the skin cool, might here very easily overlook the true nature of the disease, and say this man has no fever, no inflammation of any internal organ. Yet a careful examination shows that the right lung and pleura are extensively engaged.

In the next place, we find that the pleuro-pneumonia has attacked the upper part of the lung instead of the lower. Pneumonia has a great tendency to attack the lower and posterior parts of the lung; indeed, so frequently do we meet it in this situation, that we look upon its occurrence in the upper part of the lung as a rare exception to a general rule. The third point connected with this case is, that though the patient is labouring under pleuritis and pneumonia, his blood does not exhibit the slightest symptom of being affected by this combination of violent inflammations. When drawn from the arm, it separated very imperfectly into crassamentum and serum, and there was no deposition of that buffy coat which has been so often noticed by our ancestors as occurring in pleuritis, and hence termed crusta pleuritica. Here, from observing that there was no perfect formation of coagulum—no cupped or buffed appearance in the blood, and that the pulse was soft and regular—some persons would have argued that no inflammation was present; but how false and dangerous such a conclusion would be, any one may convince himself by making a careful stethoscopic examination.

The fourth point (which was first observed by Mr. Knott) is, that there is a considerable disproportion in the size of the sides of the chest; the right side measuring two inches and a half more than the left. Now, there must be some cause for this; and as the man has pleuritis on this side, it would be natural to infer that there is a considerable effusion of fluid in the cavity of the pleura, and that the dilatation of the side is produced by empyema. There are some circumstances, however, in this case which forbid us to adopt such a conclusion. In the first place, this great increase of size in one side of the chest would indicate a very considerable effusion. By empyema, I do not mean the effusion of a quantity of lymph, which does not push back the lung more than a line, but an effusion of fluid—of various densities in different patients, and in large quantity, exercising very considerable pressure on the lung, and pushing it back towards its root.

There are two circumstances in this case which should be attended to; first, the man is a labourer, and in such persons the chest, measured across the pectoral muscles, is always found to be on the right side half an inch, and sometimes nearly an inch, larger than it is on the left. This is accounted for by the increased development of the muscles of the right side from constant use. In the next place we find that this man has not only pneumonia and pleuritis, but also a tendency to superficial inflammation occupying the parietes and integuments of the chest, as indicated by a feeling of pain and soreness in various regions of that side, but particularly at the lower part, where the sound is clear on percussion. Now, where the sound is clear on percussion, you are aware that no effusion of fluid exists. The fact is that, in addition to pleuritis and pneumonia, the man is labouring under pleurodynia, with a tendency to inflammation in the superficial parts of the chest. Under these circumstances, we should not be surprised to find some œdema of the parts; and here we have a second cause for the greater measurement of the right side of the chest.

These are the only points connected with this case to which I shall advert at present, except to mention that the treatment was obviously indicated to be antiphlogistic. You might perhaps think that in treating this man, it was a matter of indifference whether you had recourse to tartar emetic, either alone or in combination with nitrate of potash, or to calomel and opium; but you may lay it down as a rule now firmly established, that in cases like this, the mercurial plan answers much better than tartar emetic. After bleeding this man, then, we gave him mercury in such doses as to affect his system as rapidly as possible, and we followed up our general means of depletion by the application of leeches, *which in all inflammatory affections of the chest are indicated in proportion to the pain and tenderness of the chest complained of by the patient.* Indeed, something similar must guide us in judging how far we are likely to procure relief *in case of inflammation of any internal organ, by means of the application of leeches to the surface over the organ affected.* No good is ever obtained by their application, unless tenderness or soreness on pressure be distinctly observable, and the relief is always proportioned to the diminution of this tenderness where it existed; where it does not exist, the application of leeches only leads to loss of time, and we must employ other remedies in such cases.

There is another symptom in this case which might deceive you into the belief that empyema is present; the motions of the right side of the chest are much more limited than those of the left. When you look at him stripped, you perceive an obvious difference between the respiratory motions on each side; the motions of the unaffected side are free, and much more extensive than those of the diseased side. Now, generally speaking, this is a symptom commonly observed in empyema and a few other diseases. It may also exist where there is extensive hepatization of one lung, for, in proportion to the impossibility of air entering the diseased lung, will the motions of the corresponding side of the chest be diminished.

How are we to account for it in this man's case? The pneumonia is not extensive enough to cause it, and we have no evidence of the existence of any effusion into the pleural sac sufficient to explain it. The only way we can account for it is by recollecting that the man has pleurodynia; and, as every attempt at dilating the chest gives him pain, he endeavours to curtail its motions on that side as much as he possibly can. This is a fact well worthy of notice. It exhibits to us a beautiful provision of nature, which enables a person, by an intense discharge of the respiratory function in one lung, to compensate himself for a lessened and imperfect performance of it, in that half of the chest where it is limited by pain, paralysis, or disorganization.

The next case to which I wish to call your attention is that of James Maher, aged 22, who was admitted September 4th, in a low emaciated condition. He has a very troublesome cough, which occurs in paroxysms; sputa scanty and bronchitic; can lie easier on his back than on either side; sweats after sleeping; appetite bad; bowels open; pulse 100, small, respirations hurried.

On looking at his naked chest, it is evident that the right half of the chest moves much less than the left. Percussion yields a dull sound at the lateral and posterior regions of the right side, in which latter region there is bronchial respiration without any rale; in the former there is an absence of respiratory murmur; there is bronchophony approaching to ægophony posteriorly; whereas, laterally the voice is heard much less distinctly than in the natural state: the intercostal spaces are not distended; the left side is normal.

He states that about the middle of August he fell, in a fit, upon his *left* side, and was bled four or five times largely for the apoplectic symptoms. In three days after, he got a severe stitch in his *right* side, for which he was twice copiously bled and blistered, and took some calomel and opium. The symptoms somewhat abated under this treatment, but the strength of the patient was much reduced.

September 6th.—The patient the same way; there was no rale in the chest this morning when examined. The following treatment was prescribed:—

℞. Pilulæ Hydrargyri, gr. iij.
Extracti Opii aquosi, gr. ⅓.
Fiat pilula ter in die sumenda.
Applicetur vesicatorium magnum parti dolenti.

7th.—Was attacked last night with great dyspnœa, cough very bad; spitting up *frothy* serum with a pink tinge; pulse 130, weak; face livid; hands cold; great anxiety; heart beating in a very laboured manner; extensive churning sound heard all over the chest. He was ordered carbonate of ammonia, but, shortly leaving him, raving set in and death soon followed.

The following were the morbid appearances:—The right pleural cavity contained about a quart of bloody serum; the posterior portion of the lung was covered with a pretty strong layer of lymph, which was about an eighth of an inch thick, and easily torn off; the same was observed on the parietal pleura opposite to this. The surface of the compressed lung was, as is usual in such cases, wrinkled in many places, a mechanical effect produced by compression. These wrinkles require notice; for in the case before us they imposed on more than one of the spectators, particularly at a part of the posterior surface of the lung, where one of the wrinkles formed, apparently, a deep indenture into the pulmonary substance, *which indenture containing sero-purulent matter, and being covered with a thick layer of lymph, bore a strong resemblance, on a cursory examination, to an abscess.* The bronchial tubes were found to be loaded with a frothy serous fluid, but there was no redness of the bronchial mucous membrane.

The first remark that is suggested by this case is the tendency which excessive depletion produces to the formation of inflammation. This poor man had been five times bled for a fit of apoplexy, and had been debilitated by various other depletory measures, and in three days afterwards, while lying exhausted and drained of blood, inflammation commences in the pleura, and goes on to a fatal termination, unchecked by remedies. Again, another circumstance requires to be noticed, which is, that the nature of the blood and its physical qualities must have been altered by the previous excessive depletion; for we cannot otherwise account for the rather unusual circumstance of the colouring matter being secreted by the inflamed pleura along with the lymph and serum of the blood: in a practical point of view, the sudden occurrence of a churning sound, denoting the presence of a serous fluid in the bronchial tubes, requires serious attention, for dissection proved that it was not the result of inflammation, but *was produced by a true serous flux into the bronchial tubes*, an event of the most sudden occurrence in the case before us, and which was accompanied by the remarkable rose-coloured serous sputa, which might easily have misled us into the belief that pneumonia existed. Here the colouring matter of the blood presented itself along with the serum, first in the pleural sac, and secondly in the bronchial tubes.

I shall next call your attention to a case of diaphragmatic pleurisy, in which many of the symptoms said to be characteristic of that disease were absent. A child, aged 8 years, was admitted into the Meath Hospital labouring under slight symptoms of a rheumatic character. She soon got relief, and was quite well, when one morning she got a fright from seeing a patient named Robinson in a fit of delirium, threatening violence to her. This occurred about six o'clock a.m., and at our visit at nine we found her sitting up in the bed; her breathing exceedingly hurried, 76; all the muscles of forced respiration acting energetically; alæ nasi greatly dilated at each inspiration; face pallid and puffed; lips blue; occasional dry hacking cough; countenance anxious; pulse 120, weak and small. She did not complain of pain in any particular part, but of a general uneasiness; she had no tenderness of the chest. When we placed the hand over the cardiac region, a distinct fremissement was felt, but the sounds of the heart were quite distinct and unaccompanied by any abnormal sound. There was no dulness over the heart, or any part of the chest, except at the lower and back region of the right lung, corresponding to which there was loss of the respiratory murmur. There was no evidence of any abdominal disease.

She was visited again in the evening by my clinical clerk, Mr. MacDonnell. She was then lying on her right side, but could not remain in the same position for more than a minute; her respirations were 80; her pulse not to be felt; feet cold; surface covered with clammy sweat; countenance extremely anxious; face presented a puffy appearance; occasionally biting her lips; short, dry, hacking cough; no expectoration; she did not complain of pain in the chest; the margins of the ribs were pressed upon without producing uneasiness; no pains shooting from the ensiform cartilage to the spine; pressure on the right side gave relief, and she requested this to be repeated. Though the fremissement still existed, yet the sounds of the heart were unaccompanied by any noise; and the action of that organ was strong, though, as before remarked, there was no pulse perceptible at the wrist; over the lower portion of the right side the dulness still continued, and corresponding to it was a distinct *frottement*; no ægophony. It was immediately over the seat of this *friction*-sound that pressure gave relief. At three o'clock next morning she died.

Post-mortem.—The chest was percussed: the left side sounded clear both before and behind, but the right, which during life was clear with the exception of the lower part, as before observed, now gave a completely dull sound over the greater part of its extent. On opening the thorax, about two quarts of a straw-coloured fluid escaped from the right pleural cavity. The ulmonic and parietal pleuræ were thickly covered with recently ffused lymph, bands of which extended from one to the other: hese bands were of recent formation and were easily broken lown. The thoracic surface of the diaphragm was likewise hickly covered with lymph, and the lower portion of the right ung, which lay in apposition, was agglutinated to it by this naterial, but not to such a degree as to prevent it from being letached. The lower portion of this lung was carnified—the esult, doubtless, of a previous pneumonic attack. On the left ide there was no disease whatever of the lung, but the diaphragmatic pleura was coated with lymph in the same way as on the pposite side; the lower portion of the lung was likewise covered vith this substance. The outer surface of the pericardium was ot covered with lymph, but as it lay in contact with the inflamed nembrane of the diaphragm, which muscle was acting with great nergy, some of the phenomena, such as the fremissement over he cardiac region, very probably from this circumstance receive n explanation. The pericardium contained no fluid, and this membrane, as well as the heart and its valves, were in every respect quite healthy. No disease of any of the abdominal viscera, or inflammation of the peritoneal surface of the diaphragm.

The older writers asserted that risus sardonicus and delirium were constant attendants on the affection under consideration; this we now know to be erroneous, but it is worthy of remark, that in this case not one of the symptoms laid down by moderns as depending on diaphragmatic pleurisy were present. Andral states that pain along the margin of the ribs, increased by pressure or respiration, pain in the hypochondria, and complete immobility of the diaphragm are indicative of this malady, and that the patient sits forward; any attempt to change his position producing intolerable pain. In such cases hiccup, nausea, and vomiting have been observed. In support of this view he cites four cases, yet we find in an example even better marked and less complicated than any he relates, that these symptoms were absent.

Dr. Stokes, in allusion to the above statement of Andral, says, "It is obvious that symptoms such as the above do not necessarily belong to inflammation of the diaphragmatic pleura, as they are seldom or never met with in ordinary empyema, system of black blood, yet it by no means points out the exact seat of that obstruction; the obstruction may occasionally be even on the left side of the heart. With regard to the serpentine course of the abdominal veins, I find several such cases recorded, particularly one by Dr. Wright, of Baltimore, in his contributions to cardiac pathology, and one of a very remarkable nature by M. Renaud, in which the superficial veins of the abdominal parietes carried on a collateral circulation where the *vena cava* was obliterated.

His bowels were constipated, and subject to griping pains. Urine scanty and high coloured; loss of appetite; night sweats; slight thirst; tongue clean; pulse 100, regular, and compressible.

Examination of chest.—The intercostal spaces on the left side are more distinct, deeper, and more dilated in respiration than those on the right; the latter, however, although not so well marked, are by no means obliterated or distended by pressure from within. The right side of the chest measured about half an inch less than the left.

Percussion.—Left side anteriorly, a clear sound everywhere, until we came within an inch of the sternal median line, where it became dull. Posteriorly, everywhere a clear sound. Right side, universally over every part, as dull as possible.

Respiration.—Puerile over the whole of the left side, except on approaching the sternal median line, where it assumes a tracheal character. This tracheal respiration is observed over a great part of the anterior part of the right side, where it is very loud and distinct above the mamma, feebler immediately below it, and is almost entirely lost still lower. On the posterior part of the right side, the loudness and tone of the respiration are not by any means so decidedly tracheal as anteriorly; to some the sound heard appeared to be more allied to bronchial respiration, and it is certainly bronchial in one part, near the spine. No rales are audible in any part of the chest.

Voice.—At the upper and anterior part of the right side, the voice is resonant, approaching to, if not identical with bronchophony; elsewhere, nothing remarkable was observed with respect to the voice.

Heart.—Pulsates in its natural situation, but its sounds are heard over a great extent, being audible under both clavicles, and over the whole of the right side. Right side of chest, during respiration, obviously moves much less than the left, and when he speaks, the hand placed on it feels the vibrations caused by the voice feebler on the right side than on the left.

These physical phenomena remained unvaried until his death, except that all traces of bronchial respiration soon disappeared from the right side of the chest, except at one spot near the spine ; and where anything was heard in other parts, it was now evidently a tracheal wheezing which masked all other sounds.

When this patient entered the hospital on the 1st May, the abdomen felt natural, and no enlargement of the liver could be felt, but after some time the liver appeared to have been rapidly altered, and could be distinctly felt far beyond its usual limits, forming a hard visible tumor in the hypochondriac and epigastric regions. At the same time his stools became clay-coloured, and he was jaundiced. The yellow colour, however, was not of a deep, but of a light lemon shade.

Another remarkable phenomenon developed itself before the termination of the disease : whenever he lay down, that instant a loud wheezing was heard in his chest, accompanied by a sensation of imminent suffocation ; the dysphagia increased likewise, but was never very urgent. The want of breath and a total want of sleep, with inability to lie down, and various symptoms of indigestion, reduced him to a most wretched state of suffering ; his face and neck became daily more œdematous, and the eyelids, transparent, and distended with yellow serum, were swollen in such a manner, as nearly to close his eyes for many days before death put an end to his sufferings, on the 15th of July, after a violent paroxysm of pain in the belly, to which he had latterly become subject.

Three tumors had been observed on his body, and they had latterly increased in size with great rapidity. They were immediately under the skin, which was unchanged in colour—smooth, of a round form, of the size of walnuts when observed on the first of May, but now very nearly as large as oranges. They were slightly movable at first, more fixed afterwards, and never accompanied by the least pain or soreness : at first they felt solid, but afterwards more elastic, as if they were distended with fluid contained in a firm capsule ; they were situated on the forehead, ramus of the lower jaw, and near the lumbar spinal processes.

The following were the morbid appearances found on dissection:—

Chest.—Left lung collapsed, perfectly healthy. Right lung, or rather the contents of the right side of the thorax, adhere everywhere to the parietes, by means of an intimate adhesion between the pleura costalis and pulmonalis. The pleura is exceedingly thickened and dense. In place of the right lung was found a solid mass, weighing more than six pounds, with an irregular, somewhat nodulated surface; this mass filled completely the right cavity, but did not protrude between the ribs, so as to distend notably the intercostal spaces; it encroached, however, upon the other side of the chest, extending a little beyond the median line, enveloping, and nearly concealing from view, the pericardium, great vessels, and trachea. This solid mass was removed with difficulty, on account of the adhesions, and was found to present, over a small portion of its posterior surface, a thin stratum of lung, nearly impervious to the air. The solid mass was found to be everywhere homogeneous, firm, of a white colour, slightly stained with bile, and tolerably firm and consistent in its structure, which resembled a brain partly hardened by artificial means.

When cut, each section exhibited an oozing of the softer brain-like fluid mass from the exposed surfaces, which oozing was much increased by pressure; so much, indeed, that it was obvious that the soft cerebriform matter bore a large proportion to the cellular and other structures in which it was lodged, and upon which the firmness and apparent solidity of the whole depended. The mass was somewhat lobulated posteriorly, and contained a few small cysts filled with a jaundiced serum. The right bronchial tube could be traced for a short distance into the substance of the mass, but was considerably diminished in calibre; the heart was pale, and rather atrophied; its great vessels seemed to run through the substance of the mass which surrounded the base of the heart, so that only its lower part was visible.

Contrary to expectation, the liver was found perfectly natural in size, but the gall-bladder was enormously distended with bile, and was at least three times its natural size. The apparent tumefaction of the liver was owing to its being depressed by the thoracic tumor. A tumor, consisting of several smaller ones, occupied the situation of some of the mesenteric glands, and equalled two fists in size. It consisted of the same cerebriform substance as that observed in the chest, and appeared to have arisen from degeneration of the mesenteric glands. This tumor pushing the transverse arch of the colon upwards, and the small intestines downwards, pressed upon the ductus communis choledochus, so as to prevent altogether the passage of bile into the duodenum, while its lateral portions extending to the kidneys pressed upon these organs. The substance of the liver was healthy but green, being injected with bile.

Such are the most important particulars of this remarkable case, which, during the patient's life, proved an opprobrium to the science of diagnosis, for it is scarcely necessary to observe to you, that both Dr. Stokes and myself were completely mistaken as to its nature. I forgot to mention, that in addition to the other symptoms of a moribund state of the heart's action, a very loud *bruit de soufflet* was at times observed, chiefly at the right side of the heart. Aneurism, circumscribed pleuritic effusion, and enlargement of the heart; pleuro-pneumonia, pleurisy, and hepatization in consequence of the previous pneumonia; solidification from tubercles, &c., &c., were each successively advocated: as to myself, I became quite tired of the difficulty of attempting to explain the phenomena observed, with any of the diseases I had originally fixed on as the cause of the symptoms; and latterly, however erroneously positive I had been when I took the man under my care, I gave up all further attempts at diagnosis; and yet it seems strange that the external tumors did not awaken a suspicion of the true nature of the case, for although we were not permitted to examine them, their nature was certainly the same with the internal. The truth is, that these very tumors served only to mislead me still further, for I considered them as common scrofulous formations. At the present stage of our investigations on this subject, it is premature to attempt pointing out the true features, which may hereafter serve for making a correct diagnosis in similar cases; some of these features are sufficiently obvious, but we must wait for additional facts before the symptoms peculiar to this disease can be pointed out with accuracy.*

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* These have been since admirably described in Dr. Stokes' excellent memoir on the *Diagnosis of Cancers of the Lung and Mediastinum*, in the 21st volume of the *Dublin Medical Journal*, first series.

A case of cerebriform tumor in the chest has been described by Dr. Stokes and myself, in the fifth volume of the Dublin Hospital Reports, and another, of which I shall read you a summary, has been communicated to me by Dr. Houston :—" A rare specimen of diseased lung, presented to the museum of the Royal College of Surgeons by the late Professor Todd, but of which no history was procured, as the individual, the subject of it, was in a dying state when brought into hospital. It was only learned that the disease had been the work of years; that the individual who bore it had never been much affected with pain; that the principal features of the complaint had been a continually increasing difficulty of breathing, and distressing dry cough, aggravated at times by exposure to cold, or attempts at hard labour; and that the right side had been latterly observed to grow larger than the left; the patient was about 20 years of age.

" On dissection some hours after death, both lungs were found much diseased, but the right was particularly altered in structure. Tumors of various sizes, from a pea to an orange, were interspersed everywhere throughout it, in such masses as to have caused the absorption of nearly the whole of the original structure. The larger bronchial tubes, some thin strata of vesicular lung among the less overgrown tumors, with a small part of the superior lobe, were the only traces left unchanged. The tumors were all encysted from the commencement; they consisted of a glairy, thick material, of a white colour, like pus, supported in a fine cellular web, which grew from the inner surface of the cyst, and gave such a body to the tumor, that when cut into it retained its form, and did not fall to pieces. From their first formation to their fullest growth, the tumors partook of the same characters; the only perceptible difference between the very small and very large ones lay in their greater tendency, as they grew big, to adhere and run into each other, and in the increasing proportion of fluid to solid parts. The fluid admitted of separation from the cellular basis, by friction or maceration in water. A preparation made in this way is preserved in the museum, showing the cyst and cellular tissue of one of the tumors.

"This diseased mass adhered firmly at every point to the parietes of the chest; had even grown larger than he cavity in which it lay; had protruded the intercostal spaces, and pushed aside considerably the mediastinum and heart. The disease had made less progress in the left than in the right lung; and in both its advancement was greater in the lower than in the upper lobe."

I may conclude with observing that one-half of Keating's diseased lung is preserved in the museum of the College of Surgeons, and the other in the museum at Park Street.

LECTURE XLIII.

PNEUMOTHORAX.—PNEUMATOSIS.

We have to-day, gentlemen, a case of very interesting pneumonic disease, to which I would direct your attention. It is a case of very complicated lesion of the lung, occurring in a man of the name of Michael Irwin; but what renders it most remarkable is, that notwithstanding the extensive and complex nature of the ravages committed by disease, all its symptoms had been described with perfect accuracy by Dr. Houghton, in the first volume of the *Dublin Medical Journal*, six months before the patient's decease. We had on yesterday an opportunity of verifying Dr. Houghton's statements, and I must say that his stethoscopic knowledge does him infinite credit, and furnishes the advocates of the stethoscope with an additional proof of its value and utility.

There are not less than five or six morbid alterations in the lungs and their appendages, and all these, observed on the dissection of the patient on the 24th of January, 1833, have been described in a paper published in the beginning of July, 1832, and give a remarkable proof of the certainty of diagnosis by the stethoscope. Who is there that would, fifteen years ago, venture to give a precise description of the organic lesions of an obscure pulmonary complaint? Yet here we have this accomplished, and all the morbid changes detected with the greatest accuracy.

Such of you as have read the paper in the Journal, will recollect the detail given at the time of the symptoms; the affection of the left pleura; the presence therein of air and pus; the compressed state of the corresponding lung; the existence of tubercular cavities and fistulous passages in its substance communicating with the pleura, and the tuberculated state of the right lung. All these, and the stethoscopic signs so accurately given, have been accounted for by the phenomena observed on ssection. We find the left side of the chest measuring an ch or an inch and a quarter less than the right. The left eura contained a little air, which escaped on its being opened, id about two pints of pus. On forcing a quantity of air into e lung by means of a bellows, the pipe of which was introduced to the trachea, it escaped in bubbles through the fluid contained the cavity of the pleura. The costal pleura was remarkably ickened, cartilaginous, and flocculent on its internal surface; e pleura pulmonalis had a similar appearance. The lung was mpressed laterally from top to bottom, and adhered posteriorly the distance of about two inches from the spine, and also wards its summit. At the upper part, the lungs contained veral large tubercular cavities; lower down, and corresponding the angle of the scapula, there were two fistulous openings out an inch apart. Anteriorly, about the commencement of e cartilage of the third or fourth rib, there was another, much rger than the former opening. The right lung was filled with bercles. The heart lay in the mesial line, a little to the right its natural situation; it was rather large, and both of its ntricles were dilated, particularly the right. The liver had an d cicatrix on its surface, extending inwards; it was whiter than ual. There were a few ulcerations in the ileum, and very tensive ones in the cæcum.

Here you have an instance of extensive disease arising from bercular development and scrofulous inflammation of the left ng, in consequence of which cavities filled with pus are formed its substance; these are followed by the formation of fistulæ, hich opening into the pleura produce a violent degree of flammation, and convert the pleura into the enormously ickened mass you here see. If you were to dissect this pleura ith care, you would satisfy yourselves that the increase of ickness is owing to the successive depositions of coagulable mph on its surface. Serous membranes, when inflamed, throw it in succession thin coats of lymph over their surface to a eater or less extent, and these, like one sheet of paper pasted er another, become, each in its turn, firmly consolidated with e parent membrane. It seldom happens that we have any nsiderable increase in thickness from interstitial deposition, or do I believe that it ever exceeds a line. Now we have here very remarkable state of the pleura, and, in addition, air and pus contained within its cavity, with which we find three fistulous openings communicating; and these in all probability are connected with three cavities in the lung, each of which communicates with the bronchial tubes.

With respect to this case, it is an example of the disease called *pneumothorax*. By pneumothorax is meant air in the cavity of the chest, where, of course, it should not exist. You may say, perhaps, that there is always air in the cavity of the chest; but by the cavity of the chest here, we mean the cavity of the pleural sac. I would not have detained you in speaking of the name of this affection, had it not been observed by Dr. Elliotson in his lectures, that this name has been given to it without a proper consideration of the rules of combining Greek words, and that the proper way of writing it would be pneumotothorax. I would, nevertheless, adhere to the old mode of writing this word. We leave out the letter T for the sake of euphony, and thus render the word more musical; besides, this term has been consecrated by its illustrious inventor, Laennec.

One of the most remarkable circumstances in the present case is the length of time between the development of the disease and the death of the patient. He had symptoms of pneumothorax in July, 1831, and died in January, 1833, having lived a year and a-half after he had been attacked. Again at three different periods, namely, July, 1831, December 2nd, 1831, and September 26th, 1832, he had distinct and severe attacks of feverishness and pain, showing that at each of these periods some new lesion was going on in the lung, and this, as we subsequently ascertained, was the formation of fistulous openings. The first was in July, from which he recovered, and this continued until December, when a fresh opening formed, accompanied by a new train of symptoms. On the 26th of September another formed; and it is a remarkable fact, that all the phenomena connected with these separate openings have been distinctly described by Dr. Houghton. There cannot be the slightest doubt that each of the days designated by him were those days on which fresh communications were established between the abscesses in the lung and the pleural sac. On examining the shape of the lung, you find it compressed from before backwards, so as to form a thin plate lying up against the mediastinum, the pleura and its contents occupying the arch of the chest. This accounts for the ulness of the sound posteriorly, between the angles of the ribs nd spinal column, where the thick and carnified portion of the ung lay. The existence of the fistulous openings, corresponding to the angle of the left clavicle, which communicated with the abscesses, and through them with the bronchial tubes, will explain the occurrence of bronchial respiration in this situation, for here we could detect the sound of the air rushing through the larger bronchi. It is over the place of these openings, also, that the metallic tinkling was most remarkable during life, and opposite the anterior one the *bourdonnement amphorique* was occasionally heard.

In the case I have now called your attention to, the air found in the pleural sac made its way into it through the fistulous openings connected with the bronchial tubes. This is the ordinary form of pneumothorax, but although the fact has been doubted by many writers, my experience leads me to the conclusion that air may be *secreted* into the pleural sac. Andral, who at one time believed that pneumothorax might occur thus, has, I find, changed his opinion, and in some lectures recently published* states that air is never met with in any shut sac unless it has made its way there by rupture. Now, the following are my views:—Where there has been long-continued loss of blood from any cause, the blood contains an unusual quantity of air; for nature, by absorbing air in such cases, makes an effort to keep the vascular system sufficiently full; and *this air may be secreted into any part of the body.*

Since the publication of John Peter Frank's celebrated work *De Curandis Hominum Morbis*, in the sixth book of which this subject has been treated at great length and with his usual ability, few authors appear to have studied this class of diseases with the attention it deserves; and yet the improvement lately made in our knowledge of the laws which regulate the diffusion of gases, and their transition or passage through the textures and membranes of the living body, and our more intimate acquaintance with the phenomena of healthy and diseased secretion, ought to enable pathologists of the present day to enlarge the limits of this important department of medical science. Until this is done, I most anxiously refer medical students to the excellent remarks of Frank already spoken of.

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* *Medical Times*, 1847.

Not having time at present to enter into the philosophy or general pathology of pneumatosis, I shall content myself with bringing forward a few facts connected with this subject. And, first, with regard to the occurrence of a collection of air within the cavity of the pleural sac; in the latest publications, as I have already remarked, the existence of such a disease as *simple* pneumothorax is scarcely admitted. Thus, in an article in the *Cyclopædia of Practical Medicine*, Dr. Houghton, in speaking of pneumothorax from gaseous secretion, says, "This variety has not been decidedly established by the observations of other pathologists since the time of Laennec, and we *record its existence* merely on his authority and on that of Andral, who relates a case of it, in which, however, this origin was not unquestionably proved."

On this point I may observe, that these are not the only authorities which might be cited in support of the existence of pneumothorax from gaseous secretion, for Frank long ago described a case in which paracentesis of the chest was performed for the purpose of giving exit to a suspected accumulation of pus within the pleural cavity, and in which the operation gave vent to a large quantity of air; "*Ne guttula quidem puris, sed aer cum strepitu prorupit.*" The patient perfectly recovered. There seems indeed to be no good reason why air should not occasionally collect in the cavity of the chest, as a consequence of a diseased secretion from the pleural serous membrane, as well as in the cavity of the peritoneum, in consequence of a morbid secretion of air from the internal surface of the peritoneal serous membrane, an occurrence acknowledged to be very frequent. The following cases appear to establish the fact that there is such a disease as pneumothorax, in which the air accumulated within the pleural sac is not derived from the external atmosphere through a fistulous opening communicating with the bronchial tubes, nor from decomposition of fluid effused in consequence of pleurisy into the cavity of the chest, but from the direct secretion of air from the pleural sac, in consequence of a low degree of inflammation affecting the serous membrane. Frank brings forward abundant and striking facts to prove that the subcutaneous areolar membrane (a tissue the products of whose inflammation are identical with those of serous membrane), may secrete air in abundance, and thus give rise to emphysema, when in a state of nflammation; there can be no difficulty, therefore, in ng a similar result from a certain degree of pleural ation.

called by Dr. Dwyer to visit a young gentleman affected igh and mild feverish symptoms. Indubitable evidence rded by the stethoscope and percussion of a considerable of the lower lobe of the left lung being on the verge of ition, for there were dulness, bronchial respiration, and scure crepitus, with bronchophony over the affected osterior portion of the lungs. In no other part of the ig whatever was there dulness; indeed, the reverse servable over its infero-anterior portion, which gave a turally clear sound, particularly in the region usually d by the heart. It was evident that no effusion of fluid in addition to the pneumonia detected at the base of the ig. On closer examination we were, therefore, greatly d at finding that the heart was pushed out of its place, sated quite close to the mamma on the right side.

the heart been pushed *thus far out of its place* by fluid into the left pleural sac, it is clear that the fluid must en very considerable in quantity, and *must have neces-illed the space usually occupied by the heart, as well as ough which the heart was forced* in pushing the medias-from the left to the right side. Obvious considerations impossible for the heart to be dislocated as this young an's was, so far to the right side, by means of an effusion into the left pleural sac, without the occurrence of ex-dulness or the other physical signs of empyema in the nterior portions of the left side of the thorax. No case cation of the heart by means of fluid to such an extent r been recorded, without these signs being at the same served most extensively in the left side of the chest.

his case, however, the heart was dislocated as already d, and yet not a single physical sign of the presence of the left side existed. Some who examined this case d the opinion, that the heart was dislocated by means stomach being distended with wind. The relative anato-positions of the heart and stomach render it actually ible for the latter, even when distended to a maximum, to e heart in the slightest degree towards the right side;—

indeed, in the numerous distressing cases of ventricular and intestinal tympanitis which I have witnessed, even in those where the belly has been most inflated, I have never seen such an effect; but it is unnecessary to controvert this opinion further, for in a day or two the belly became quite fallen and soft, while the heart's dislocation still continued.

There is no other way then of accounting for the latter phenomenon, except the supposition that the heart was pushed out of its place by air effused into the left pleural sac, in consequence of a certain degree of pleurisy accompanying the pneumonia of the left lung. The physical signs such an occurrence must necessarily give rise to would perfectly agree with those observed. It is important to add, that the inflamed portion of the left lung now went through the usual process of healthy resolution, but that the heart had regained its natural position many days before the resolution of the pneumonia was completed; an occurrence we can readily explain on the natural supposition that the absorption of the effused air was a process more easily and readily performed by the pleura when its inflammation was cured, than was the restoration of the lung to its original healthy structure after the pneumonia had been checked.

A recent writer on pneumothorax expresses himself on this subject in the following words:—

"*Pneumothorax* may be produced in three different ways:—1. It may be the consequence of a partial pleurisy. We have mentioned, that after a pleuritic effusion has long compressed the lung, and the compression has been perpetuated by a rigid false membrane formed over it, the absorption of the liquid leaves a void, which the collapse or contraction of the walls of the chest is in some cases insufficient to obliterate, and this void is sometimes filled with air secreted by the membranes. We have seen two instances of partial pneumothorax produced in this way. They each occupied about half of the pleural sac, in one case the upper, in the other the lower half; and the lung in both cases was strongly bound down by fibro-cartilaginous membrane, and condensed in the part contiguous to the empty space. There was also some contraction in the chest in both cases. This kind of pneumothorax is very rare.

"Another kind of pneumothorax is that which may be called idiopathic, and arises from an effusion or secretion of air into the sac of the pleura without perforation. This is also of very rare occurrence. It is said to occur sometimes towards the termination of fatal diseases, in the same manner as tympanitis occasionally occupies the peritoneal sac under similar circumstances. We have never met with such a case in which the signs of pneumohorax were observed during life; but we have several times seen a little air in the pleural sac when it is opened after death, without any discoverable perforation of the pleura. It is possible that a little air may have been exhaled from the animal fluids after death, and then increased by exosmosis through the ung. The facility with which gases pervade dead membranes countenances such a notion. Pneumothorax is also said by Drs. Hudson, Graves, and others, to have occurred in a few instances at the commencement of pneumonia, and to have soon afterwards disappeared; but as the chief sign in these cases was a remarkable resonance on percussion, we suspect that these were examples of the production of tracheal or amphoric sound, from consolidation of the upper lobe of the lung, and not cases of pneumothorax."—*Library of Medicine,* vol. iii. p. 129.

You will perceive from the above passages that Dr. Williams seems unwilling to believe in the existence of such a disease as pneumothorax from secretion by the serous membranes, and he informs us that "after a pleuritic effusion has long compressed the lung, and the compression has been perpetuated by a rigid false membrane formed over it, the absorption of the liquid *leaves a void,* which the collapse or contraction of the walls of the chest is in some cases insufficient to obliterate, and this void is *sometimes* filled with air secreted by the membranes." Here he admits that the membranes are capable under certain circumstances of *sometimes* secreting air to fill the void left by the absorbed fluid; and he might have added, that in all cases where an absorbed effusion has not been followed by contraction of the side, or a return of the lung to its fully expanded condition, the space previously occupied by the effusion is now filled with air secreted by the pleura. This is a wise provision; for it must be evident to every one that such a condition as is implied in the sentence I have just quoted, viz., the existence of a perfect vacuum between the collapsed and compressed lung and the parietes of the chest, is totally inconsistent with the well-known laws of atmospheric pressure.

As regards the last sentence of the paragraph, I beg to state that Dr. Williams could not have read the foregoing case with any degree of attention, or he would have perceived that the conclusion I arrived at was not drawn solely from "the remarkable resonance on percussion," which he suspects arose from "tracheal or amphoric sound produced by consolidation of the upper lobe of the lung." It will be recollected, that in addition to the signs of the presence of air in the pleural cavity, we had dislocation of the heart as complete as I ever witnessed in empyema; and until Dr. Williams can exhibit a case of consolidated upper lobe, with tracheal or amphoric sound, producing dislocation of the heart and the other phenomena observed in this case, I shall continue in my belief that these phenomena were produced in the way I have mentioned.

The following case also fully corroborates the opinions I have now advanced, and establishes the existence of such a disease as *simple pneumothorax*:—

The Rev. Mr. ——, a gentleman about 40 years old, with a largely developed chest and robust frame, caught cold and was attacked with cough, pain in the right side, bloody expectoration, and, in short, the usual symptoms of very intense pneumonia, commencing in the inferior portion of the right lung, but advancing rapidly upwards, until the whole of that lung was engaged in the disease. As the inflammation extended, the inferior portion of the lung became engorged with blood, and totally impervious to the air, and consequently the part of the chest corresponding to it everywhere yielded a dull sound on percussion, while the superior part on the right side was as sonorous, when percussed, as the left or healthy side of the chest. Such was the state of things on the third day of the disease.

On the morning of the fourth day a remarkable change was found to have occurred in the course of the night; anteriorly the dulness of the lower portion of the affected lung still continued, and, indeed, could not be greater; but from a little below the right mamma, as far up as the clavicle, which region, at the preceding visit, was naturally sonorous, the chest yielded a preternaturally clear and hollow sound, that at once attracted the attention of Sir Henry Marsh and myself; for twelve hours previously no such morbid clearness had existed. No respiratory murmur whatever could be heard in this region, and, consequently, we were led to the conclusion that the subjacent lung was here pushed back and compressed by air effused into the cavity of the pleura.

As the disease was altogether confined to the right lung, we could more accurately compare and contrast the phenomena presented by the corresponding region of the left side of the chest, with those observed on the right, and we found that the former, naturally sonorous, and of course much less clear on percussion than the upper portion of the right side, was performing its proper functions with increased energy, everywhere presenting well-marked puerile respiration. The existence of pneumothorax occupying a considerable portion of the right pleural cavity was, therefore, evident; but the source of the air was not so clear. I reminded Sir Henry Marsh of the other case, in which I observed pneumonia combined with simple pneumothorax, and after a careful consideration of all the symptoms of our patient, he concurred with me in thinking it highly probable that the present case was one of a similar nature.

Our patient had a well-formed and remarkably capacious chest, was of a very strong constitution, and before this attack enjoyed an uninterrupted state of good health. In such a person the pre-existence of tubercles was most improbable, of a tubercular abscess almost impossible; we, therefore, rejected the idea of the infused air being derived from the bronchial tubes through the medium of a fistulous communication, and adopted the opinion that the pneumothorax was caused by air suddenly secreted by the inflamed pleura. The correctness of this opinion was established beyond the possibility of doubt, both by the subsequent progress of the symptoms, and by the speedy and perfect recovery of the patient; for it is almost unnecessary to observe, that a recovery where pneumothorax depends on a fistulous communication is, if indeed it ever takes place, of the rarest occurrence, and never takes place rapidly.

At our next visit, in about sixteen hours after, we found the whole region that had been preternaturally clear on percussion, now as dull as possible, and presenting a very obscure respiratory murmur, mixed with some crepitus. The crepitus was evidently close to the ear, if I may use that expression, and we now felt no doubt that the air so suddenly effused had been as suddenly absorbed, and its place occupied by the inflamed and engorged lung. In the course of four or five days, under proper treatment, this dulness began to diminish, and nearly disappeared in a few days more, during which time the respiratory murmur proportionably increased, and the gentleman afterwards rapidly recovered. It is peculiarly gratifying to me, that the preceding facts fell under the notice of a physician of such experience as Sir Henry Marsh, upon whose accuracy of observation such full reliance may be placed. This case I consider quite sufficient answer to the remarks of Dr. Williams which I have already cited; and together with the case I observed along with Dr. Dwyer, added to the evidence of Laennec, Frank, and others upon the subject, leaves no doubt whatsoever of the existence of such a disease as pneumothorax from gaseous secretion.

As I have been speaking of the secretion of air into the pleural sac, permit me to devote the remainder of this lecture to some observations on other forms of pnuematosis. The next species I shall consider is the abdominal, of which there are two varieties—the intestinal, where the accumulation of gas takes place within the alimentary canal; and the peritoneal, where it occurs in the peritoneal sac. Frank's observations on this subject are extremely interesting, but do not point out any clear mode of distinguishing these varieties from each other. It must be confessed, indeed, that they both occur together in some cases, and then the diagnosis is, of course, impossible; in general, however, *particularly when chronic,* the peritoneal pneumatosis, or tympanitis, may be distinguished with sufficient accuracy. In this variety of the disease, the general health is unaffected, the appetite good, the bowels regular, and the patient does not complain of flatulence, borborygmi, or colicky pains. The shape of the belly, too, in peritoneal tympanitis is more prominent and globular than in the intestinal, and in appearance more closely resembles the abdomen of a woman far advanced in pregnancy. The latter circumstance, indeed, often constitutes the sole annoyance complained of by the patients, who are generally young unmarried females.

As a contribution to the diagnosis between chronic intestinal and peritoneal tympanitis, I may observe, that in the latter, change of posture always produces a change in the situation of the most sonorous part of the belly, which invariably occupies the most elevated part. This, to a certain extent, likewise takes place in intestinal tympanitis, but not in so remarkable a manner as in the peritoneal. Thus, in the case of Mary Callaghan, aged 15, admitted into Sir Patrick Dun's Hospital in April, 1833, there was no derangement of the general health; her appetite was good, tongue clean, and she was not at all annoyed by borborygmi or flatus in stomach or intestines; the bowels also were regular. All this was inconsistent with intestinal tympanitis; her abdomen was globular, and measured thirty-one inches round the umbilicus, which, considering her age and slender make, argued a great increase in size. When she lay on her back, the anterior and antero-lateral portions sounded clear, the postero-lateral portions dull; when she lay on one side, the opposite side of belly then sounded clear. This peritoneal tympanitis *had gradually attained to its present magnitude during the preceding year.* It did not affect her respiration; there was no œdema of the extremities, and the abdominal tumefaction was not subject to temporary alterations in size, either from eating any particular article of food, or any other cause.

I have seen several cases similar to this, unaccompanied by menstrual derangement, and where the unseemly appearance of pregnancy was the cause of much annoyance. I must confess that all the remedies I have tried in such cases have generally failed altogether, although the greatest diligence was used in applying stimulating and carminative liniments, bandages round the belly, &c., &c. In such cases I have administered, without good effects, oil of turpentine by the mouth and in injections; iron, bark, iodine, diuretics, and a continued course of smart purgatives, together with the tepid salt-water shower bath, but have not found any of these means useful; for the disease has resisted them all, and continued month after month unabated. It is chiefly with a view, therefore, of eliciting further information on this subject that I have made the foregoing observations; for although the disease in question is often quite unattended with any feeling of abdominal tenderness, or indeed any symptom of deranged health, yet the females so affected, and their friends, look for its cure with anxiety, and naturally become impatient when they find the size of the abdomen undiminished, notwithstanding the application of various remedies.

When peritoneal tympanitis arises very suddenly in the course of a few hours, or of a few days, the prognosis is much better, and we have a much less obstinate disease to contend with, as it seldom continues long, and often disappears as suddenly as it came. This tractable variety occurs not merely in unmarried hysterical females, but also very frequently in women shortly after delivery. The chronic peritoneal tympanitis is of common occurrence in charitable institutions devoted to the education and support of young females, and then it seems connected, in most instances, with a scrofulous diathesis, produced by confinement and an exclusively vegetable diet.

The peritoneal tympanitis may occur as an acute disease arising from peritoneal inflammation, and complicated with intestinal tympanitis, and then it is not rare to see the intestinal tympanitis disappear when the inflammatory symptoms have been overcome; while the peritoneal tympanitis continues for a long time unabated, without, however, producing any inconvenience but that arising from a certain feeling of distention it produces. A succession of blisters and mercurial ointment appeared useful in such cases.

In these observations I pass by, without notice, the common and well understood form of intestinal tympanitis met with every day in hysterical females, and giving rise to abdominal tumefaction, sometimes confined to one portion of the alimentary canal, and sometimes apparently extending over its whole extent; a form of tympanitis often as remarkable for the suddenness of its disappearance as for the multiplicity of hysterical symptoms by which it is usually accompanied.

I have already adverted to the occasional occurrence of spontaneous emphysema seated in the subcutaneous areolar tissue; I have nothing to add to the full and beautiful description given by Frank of this, except the following remarks on that variety of the disease which sometimes follows great loss of blood. In the *Gazette Médicale*, tom. iii., No. 103, is a very interesting memoir by M. E. Rebolle de Gex, on *A New Species of Emphysema developed after Profuse Hemorrhage.* In one patient, named Ducret, who died in the Hotel Dieu of repeated attacks of profuse epistaxis, and whose body was examined fifteen hours after death, before the least symptom of putrefaction had commenced, the coagulated blood found in the heart and large vessels contained numerous small cells filled with air, and in fact was emphysematous. The large vessels contained many small bubbles of air, but this phenomenon was still more striking in the smaller veins, where it resembled the contents of a spirit of wine thermometer into which bubble after bubble of air had been introduced. When the vessels were divided, gas escaped with the blood.

Another case, related by the same author, and several experiments on animals which he instituted, leave no doubt of the fact, that gas exists in the circulating system after profuse hemorrhage. I do not know when I was more pleased than on happening to meet with Rebolle de Gex's memoir, for a case precisely similar to those he has related occurred in my own practice last spring, at which time I had never heard of any facts analogous to what I then observed, and I was consequently much embarrassed in endeavouring to account for it.

A gentleman about fifteen years of age, residing in the neighbourhood of Dublin, was attacked with excitement of the vascular system and a quick thrilling state of the pulse, which ended in repeated attacks of profuse epistaxis. This hemorrhagic tendency was probably connected with hypertrophy of the heart, and had produced an extreme degree of debility, when Mr. Kirby, who was in attendance with me, discovered that the subcutaneous areolar membrane of the abdomen had become emphysematous. Neither Mr. Kirby, nor Dr. Jacob, who was attending along with us, was aware that this emphysematous state arose from the preceding hemorrhage.

Everything connected with the development of gas in the vascular system is calculated to excite interest. I have already stated my opinion as to how it happens that hemorrhage predisposes to such an occurrence; I may also observe, that when air is once generated in morbid quantity, it may occasion the most fatal symptoms, as is proved by the sudden deaths which have occurred during operations, in consequence of the absorption of air into the veins. Morgagni long ago expressed an opinion, that certain apoplexies depend on a morbid effusion of air within the cranium, and cites the authority of Hippocrates in support of this hypothesis. Valsalva mentions that he once found the heart and the veins distended with gas; Grotz witnessed the same in a woman who had died of suffocation, and Ruysch reports a similar phenomenon which occurred in a case of sudden death; but of the facts hitherto recorded, those observed by Rebolle de Gex and by M. Bally are the most remarkable, and well deserve the attention of pathologists, particularly of those physicians who have explained spontaneous combustion, on the hypothesis of an inflammable gas being in some cases developed in the areolar tissue.

In the case detailed by both these authors, on cutting the emphysematous parts, a gas escaped which ignited on the contact of the flame of a candle ;* and in Rebolle de Gex's case, even the muscles were affected: for he says that when the muscles were pressed before the light, there was a sparkling and crackling like that which is produced by squeezing out the essential oil from an orange peel before a taper. As the morbid development of gas in this case was a *consequence of profuse hemorrhage following on operation*, it more especially deserves the notice of every practical surgeon.

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* Bally's case, which occurred in the Hotel Dieu, *was not preceded by hemorrhage*. It is noticed by Dr. Apjohn, in an able article on Spontaneous Combustion, in the *Cyclopædia of Practical Medicine*.

LECTURE XLIV.

SPASMODIC ASTHMA.—PHTHISIS.

Before I proceed to the more immediate subject of this day's lecture, permit me to say a few words on the pathology of spasmodic affections of the bronchial tubes. The investigations of Reisseisen and other anatomists have confirmed the old opinion revived by Laennec, that the bronchi are capable of spasmodic constriction. The researches of Rigot at the veterinary school of Alfort have confirmed the results obtained in the human subject, for Rigot has announced the existence of a muscular membrane or coat beneath the mucous membrane of the bronchial tubes, and has traced to that coat the greater part of the nervous branches derived from the bronchial plexus. "A similar distribution of the pulmonary nerves well explains, according to M. Rigot, the phenomena of suffocation observed after division of the pneumogastric nerves, and which are evidently nothing more than paralysis of the motor portion of the lung. In pursuing these researches, the Professor has often observed an obliteration of many of the divisions of the pulmonary artery caused by grey fibrinous concretions, similar to those which are found in old aneurisms. The existence of these fibrinous depots always coincides with certain organic changes in the lungs, as induration, tubercles, grey hepatization, or simply an emphysematous state of the lungs."

This latter observation, if confirmed, is very important, and proves that when any portion of the lung discharges its respiratory functions imperfectly or languidly, the quantity of blood *brought to or attracted by that part* necessarily diminishes; and at length, if the impediment to respiration be complete, no more blood arrives at it through the channel of the pulmonary artery, and *the corresponding branch of that artery is consequently filled with coagulum.*

In many diseases, of which asthma is the best known example, the bronchial tubes are liable to sudden narrowing of their calibre. In pertussis the fit of whooping and coughing is often preceded for several minutes by an accelerated respiration, and a sudden and very remarkable increase of bronchial rales within every part of the chest, owing no doubt to bronchial constriction coming on for some minutes before the spasm has extended to the trachea and larynx.

I lately attended, along with Mr. Pakenham, a boy who laboured under frequent and violent convulsions produced by acute hydrocephalus. The moment the convulsions of the voluntary muscles supervened, a universal and loud wheezing took place in the chest, and continued as long as the fit lasted, and then ceased. This association between convulsions of the voluntary muscles and spasm of the bronchi is perhaps not so rare as is generally imagined.

Formerly physicians recognized spasmodic asthma as a separate disease, frequently occurring and requiring a distinct mode of treatment; but when spasm went out of fashion, and morbid anatomy became an object of enthusiastic pursuit, the existence of this form of the disease was denied. Corvisart had shown that supposed asthmatic symptoms often depended on diseases of the heart, and others have demonstrated that asthma was occasionally produced by inflammation or dilatation of the bronchi, emphysema of the lung, &c., &c., the disbelief in the existence of pure spasmodic asthma became very general.

Of late years, however, a more accurate acquaintance with the construction of the bronchial tubes, and a more attentive examination of the physical phenomena which actually occur during the asthmatic paroxysm, have led pathologists back to the old opinion, and accordingly we find nervous or spasmodic asthma admitted in the catalogue of diseases by Laennec, by Forbes,* and by Copland.†

It was not without surprise, therefore, that I found the doctrine of the non-existence of such a disease as nervous or spasmodic asthma advocated by a physician of considerable celebrity—Dr. Clutterbuck,‡ who in his very valuable clinical lectures makes the following remarks: "Before going into particulars on this branch of our subject, it will be desirable to inquire how far the term spasm is really applicable to affections of the respiratory organs; or, in other words, to what extent the respiratory muscles are concerned in certain cases of dyspnœa; for it is to muscular structures only that spasm can be referred.

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* *Cyclopædia of Practical Medicine.* † *Dictionary of Practical Medicine.*

‡ *Medical Gazette*, July, 1840.

"The only muscles found in the course of the air-tubes are those of the larynx; but these, as before observed, have no share in producing genuine asthma. It has been conjectured, indeed, by some, I should not say proved, that the back part of the trachea that is placed between the extremities of the cartilaginous rings, and which has been generally considered as ligamentous merely, is in reality of a fibrous or muscular structure, and consequently, that spasmodic contraction of these fibres may be a cause of periodical asthma. To this it may be replied, that not only has a muscular structure, as here supposed, not been satisfactorily shown to exist, but contraction of the tube is particularly guarded against by the cartilaginous rings themselves; a structure that is gradually changed into ligamentous, as the tube divides and subdivides. Where, therefore, muscular contractility could serve no useful purpose, as far as we can judge, but where, on the contrary, it could only be exerted to the detriment of the function concerned, it seems unreasonable to infer the existence of spasm at this part, in order to account for the asthmatic paroxysm.

"But while I contend for catarrh being the true origin of asthma, I am not disposed to deny altogether the participation, to a certain extent, of the muscles of respiration, or rather I should say of the diaphragm, in producing the phenomena of the disease; whether the intercostal muscles have any share in the matter we seem to be wholly ignorant."

When I first perused this passage, I was tempted to publish some remarks on the numerous anatomical errors it contains; but I was prevented from adopting this course by the consciousness that errors so obvious would find few supporters, and I preferred leaving to others the task of their exposure, if exposure were deemed necessary. Now, however, that I am engaged in the consideration of some circumstances connected with spasmodic affections of the bronchial tubes, it becomes a duty upon my part to notice Dr. Clutterbuck's opinion, as it is decidedly hostile to the supposition that such a disease even exists.

First, as to his assertion, "*contraction of the tube* (i.e., *trachea*) is particularly guarded against by the cartilagi rings themselves." In making this assertion it is quite obv Dr. Clutterbuck forgot the consequence which follows from tracheal rings being incomplete, and circumscribing sca more than two-thirds of the diameter of the tube; an arra ment evidently made for the sake of permitting the diam of the trachea to be diminished or increased. Secondly, a Dr. Clutterbuck's assertion, "that the only muscles foun the course of the air-tube are those of the larynx," and ag "not only has a muscular structure, as here supposed, not l satisfactorily shown to exist" (viz., in the back part of trachea between the cartilaginous rings); all that is necessar say is, that there never was, or could be, any doubt respec the existence of a muscular membrane, which is about half a in thickness when contracted, and is as obviously muscula any other portion of the muscular system whatsoever.

Dr. Forbes and Dr. Copland have truly observed, tha accounting for the existence of spasm in asthma, we are restricted (as Dr. Clutterbuck seems to imagine) to the the muscular apparatus of the trachea performs, for there is doubt that the whole system of the bronchial tubes enjoys function of vital contraction, as is proved by the anatom investigations of Reisseisen—to which I have at the comme ment of this lecture called your attention, and confirmed by physical phenomena observed in the respiration during fit asthma, hooping cough, &c. Of the bronchial muscles, Me says,* "in the interior of the lung these muscular fibres incr in proportion as the cartilaginous rings diminish in size number, and may be distinguished round the whole circumfer of the smaller bronchial tubes, even where no further trace the cartilages can be detected."

Thus, then, it is evident that to account for the spasm symptoms of asthma we need not have recourse with Dr. Clut buck to the diaphragm or intercostal muscles, but to the mus of the trachea and bronchial tubes themselves; on the wh therefore, we may conclude that those who have returned to opinions professed by our predecessors are not so much mista as their opponents pretended.

Even where the paroxysm is intense in degree and durat where the patient is obliged to sit up half the night; where any attempt to lie down produces symptoms of asphyxia; where hours are spent in extreme distress with lividity of face and lips, gasping, loud wheezing, and great fulness of the vessels of the head and neck; even under all these circumstances the attack may be nothing but a fit of pure spasmodic asthma. A person thus affected may spend a whole night in the way I have described, and yet, towards morning, he may sleep a few hours, and awake refreshed and comparatively free from dyspnœa, and in the course of the day may be able to go upstairs quickly, run, ride, even hunt without difficulty.

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* French Translation, tom. iii. p. 516.

I have in my recollection the cases of several young men subject to severe paroxysms of asthma for five or six nights in succession, and who immediately after the paroxysm disappeared could use any active exercise as well as the most vigorous and healthy of their companions.

These facts establish the existence of a disease deserving the name of spasmodic asthma, and show that very violent paroxysms of difficult breathing may occur in persons free from organic affection of the heart or lungs. When, however, any permanent change in the structure of the respiratory or circulating apparatus exists, then such changes become the exciting causes of paroxysms of dyspnœa, often closely resembling true spasmodic asthma, but readily distinguishable from it if due attention be paid to the history of the patient's sufferings and his state between the fits.

I have now met with so many cases of young persons in whom no trace of any organic complication existed, that it seems to me more than probable that spasmodic asthma is not so rare a disease as is imagined. In a little boy, some particulars of whose case I published, the attacks were frequent, violent, and to all appearance purely spasmodic; he got a very severe paroxysm of gout (hereditary from both his father and mother) in his foot, and has never since had asthma, though four years have now elapsed, and he has been subject to all the excitement and violent exercises of a public school.

Mr. Fleming, now of the Isle of Man, and Sir Philip Crampton, attended with me a young gentleman aged about twelve, who was subject to violent dyspnœa, increased by even the most gentle exercise; indeed for many months he could not walk even quietly in his room without incurring the risk of suffocation from want of breath, attended with palpitation, wheezing, and all the symptoms of approaching asphyxia; every remedy we could devise was tried most perseveringly for a year without the slightest benefit, when he got typhus fever, from which he narrowly escaped, but since his recovery he has never had even the least vestige of his former complaint.

These two cases exemplify, in a remarkable manner, the influence which the general state of the constitution often exerts on local affections.

Asthma, like all other nervous diseases, is subject to the most unaccountable variations, and is most uncertain as to the effects which our remedies or the influence of physical agencies produce. The following is an example. In December, 1839, I attended two gentlemen residing in the same street, and each about forty-five years old; neither was liable to any other disease, and they were both short and stout. On a very cold morning I found one of them very ill indeed; he had not slept at all during the night, and had every moment been on the point of smothering from asthmatic dyspnœa. The extreme violence of the paroxysm he attributed to the fact that his bedroom chimney had smoked occasionally during the night, and the weather was so cold that he was afraid to open the window to let out the smoke.

I ordered him to change his room, and I then proceeded to visit his neighbour, and found him sitting in a room full of smoke. He apologized to me for introducing me into so disagreeable an atmosphere, and explained that when the fit of asthma became very bad, the only sure means of obtaining relief which he knew of was to get a good coal fire lighted in the grate, which being done he made his servant occasionally obstruct the progress of the smoke up the chimney, and thus maintain a certain density of smoke in the room; this never failed, he assured me, to bring relief. This gentleman was of very active habits, was agent to several large properties, and consequently obliged to travel much about the country; experience had proved to him that he could derive no benefit from turf smoke, and therefore he never stopped at an inn where they had no other fuel but turf, as he felt himself insecure unless he could procure coal smoke in case of an asthmatic attack. Such *idiosyncrasies* will ever baffle the researches of the mere morbid anatomist, but afford a useful lesson to the practical physician.

The phenomena of this disease are calculated to throw much light on the nature of what has been termed wheezing. A person subject to asthma, who has been breathing tranquilly the whole evening, may be attacked before midnight with difficulty of respiration, and a wheezing so loud as to be heard on the stairs; this will continue for several hours, and then terminate in some with a copious discharge of sputa, *in others without any expectoration whatever.* When we apply the stethoscope to the chest of a person so affected, we hear a great number of bronchitic rales, showing that the larger and smaller tubes are both engaged; this is a matter of frequent occurrence in cases of dry asthma where there is no expectoration, and where the fit terminates in a few hours, not leaving behind the slightest trace of pulmonary derangement.

Hence we are led to the conclusion that sounds of various characters and remarkable intensity may be produced without any inflammation whatever, and in fact without any remarkable alteration in the secreting functions of the bronchial mucous membrane, and that these sounds may wholly disappear where there has been no expectoration, and consequently where the bronchial tubes have not been cleared out. This is a fact worthy of being held in memory. Stethoscopists, when they hear bronchial rales, are apt to attribute them to the existence of bronchial inflammation; but here, with distinct proofs of the absence of inflammation, you may have a *maximum* of bronchial rales, and in the space of a few hours you may not have a single sound at the very points where so many were audible before.

It is obvious, therefore, that some of the received doctrines on the subject of bronchial rales are still open to discussion. The practical inference, however, to be drawn from this fact is, that we should study such rales with great attention, and in connexion with other signs and symptoms, lest we be induced to treat antiphlogistically a case in which depletion might be uncalled for or injurious, an error by no means unfrequent among those who rely too exclusively on physical signs.

As to the treatment of spasmodic asthma, I have but little to add to what is generally known. It is often serviceable to stupe the whole chest during the fit with flannel wrung out of water as hot as can be borne, and in some persons, much advantage is derived from small but very frequently repeated doses of ipecacuanha wine, mixed with an equal portion of good tincture of castor. In a case of spasmodic asthma which I attended with Sir Philip Crampton, the following draught prescribed by him was found very effectual:—

℞. Acidi Hydrocyanici, min. iij.
Creasoti, min. iij.
Olei Terebinthinæ, min. x.
Mucilaginis, fʒj.
Aquæ Cinnamomi, f℥i. Misce.

Of this, half was taken for a dose, and repeated if necessary.

With respect to the employment of stramonium in asthma, I may remark that when smoked it acts in some cases almost magically, altogether preventing the access of the fit, while in others it is not only inert, but is often productive of injurious effects; unfortunately, however, we cannot predicate the individual case with which it is likely to agree. One gentleman whom I attended, and who derived much benefit from its use, gave me a practical hint of much value, as to the manner in which it ought to be smoked, namely, that the lungs should be as completely as possible exhausted of air by a forced expiration, before inhaling the smoke of the stramonium, and that after each inhalation the lungs should be in the same manner completely emptied. This gentleman also remarked to me, that he derived more benefit from the use of stramonium grown in America than from that of home growth.

I shall next proceed to speak of phthisis, a disease of the highest importance, and calculated to excite a very deep interest, whether we view it in relation to the insidious nature of its origin and progress, the selection of its victims, or the number and frequency of its attacks. From calculations founded on the tables of mortality and other data, it has been computed that sixty thousand persons die annually of consumption in Great Britain; but as this computation has not been made with reference to the great increase of population within the last few years, it is probable that the average amount of deaths from tubercular phthisis may, without any exaggeration, be nearly seventy thousand in the year. Nor, if we refer to the returns o the Registrar-General of England for 1847, can we consider that this calculation is overdrawn. There are 117 districts include in his reports, the yearly deaths in which comprise 47·11 per cent. of the deaths in all England and Wales.* In London, in the year 1847, the deaths from all causes were 60,442, and those from consumption 7,010; now the population of London at the last census, in 1841, amounted to 1,948,211, and at present may, in round numbers, be computed at two millions; thus, calculating still in round numbers for conveniency sake, a 285th of the inhabitants of London die annually of consumption. The population of Great Britain at the last census was 18,527,351, or, as it may now be estimated, nineteen millions; and supposing the mortality from consumption to be in the same ratio as in London, it would give as a result 66,666. If to these we add 16,000, the average mortality from consumption in Ireland for the five years ending 1840, as given in Mr. Wilde's able and valuable report on the Irish census of 1841, we shall have a total annual mortality from this disease in Great Britain and Ireland of nearly seventy-three thousand.

Phthisis is a disease which, more than any other, demands the sympathy and excites the commiseration of the friends and acquaintances of the sufferers. Some diseases are borne in silence and concealment, because their phenomena are calculated to excite disgust; to others, the result of vicious courses, the stigma of disgrace is attached; unsightly ravages of the human frame, or the wreck of the mental faculties, inspire us with horror rather than with sympathy; but consumption, neither effacing the lines of personal beauty, nor damaging the intellectual functions, tends to exalt the moral habits, and develop the amiable qualities of the patient, and from its melancholy character gives to our feelings of commiseration a more than ordinary intensity. Most persons die of consumption in the bloom of youth, at a period when hopes are brightest, and the capacities for enjoying life are in full vigour and maturity; most of its victims are remarkable for the early unfolding and brilliancy of their mental accomplishments; and many a family has to regret that, by tubercular phthisis, some of the fairest and best of its members have been hurried to an early grave.

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* Report for the quarter ending March 31st, 1847. The calculations contained in a note to this lecture in the first edition of this work were taken from a work by Dr. Gilbert on Consumption, and erroneously made on the supposition that the returns included all England and Wales; the mortality from consumption was consequently very much underrated.

I am not, gentlemen, going to treat of the subject of consumption in detail; I do not intend to enter into a description of its symptoms from their origin to their termination, to exhibit its various phases, or to enumerate the stethoscopic phenomena observed during its progress. To do this would require a very long time, and many lectures; my purpose is merely to give a general *coup d'œil* of its pathology and treatment. The occurrence and development of tubercles in phthisis, constituting the most remarkable phenomena of the disease, have engrossed, almost exclusively, the attention of medical men, and, consequently, they have attached an undue degree of importance to them as the cause of phthisis.

Here I beg leave to state, that I do not intend to enter into a description of the different forms of tubercle, whether they occur as separate and distinct productions, or in the shape of tubercular infiltration; this has been treated at large by Laennec, Andral, Louis, and various other writers; but will only remark that, with regard to tubercles, I am inclined to limit their influence in producing consumption. I grant that tubercles in either state, occurring in very great numbers, or very rapidly developed, will occasion very serious inconvenience and danger, by diminishing the power and extent of the respiratory apparatus. If, instead of a pervious lung, you have one-half of this organ obstructed in its function by tubercle, the injurious effect on respiration is evident. Cases of this kind are of no uncommon occurrence; I have seen tubercles, to an extraordinary extent, make their appearance in the lung in the space of two or three weeks, and have known persons to die of the suffocation caused by this rapid development without the usual symptoms of phthisis. We had some time ago an instance of this, in a young woman in Sir Patrick Dun's Hospital, who died, in fact, of what may be termed tubercular asphyxia, arising from the rapid and general formation of those morbid productions. She had scarcely any of the common symptoms by which consumption is characterized; her death was the result not of the suppuration which attends phthisis, but of the suffocation which arose from imperfect respiration; and this is a distinction which I wish to draw strongly and broadly.

It is, I believe, a generally received opinion, that tubercles, by producing inflammation and suppuration, are the cause of phthisis. This I doubt, or even deny. I look on tubercular development and consumption as the consequences of that particular state of constitution, which occasions what is falsely termed tubercular inflammation, a state of constitution in which we have three distinct processes, attended with corresponding morbid changes, each different in itself, but depending on one common cause.

Every form of consumption which has hitherto come under our notice is referable to one common origin, and this is that debilitated state of constitution which has been termed the scrofulous habit. One of the first tendencies of this habit is to the formation of tissues of an inferior degree of animalization, among which I class tubercles, whether occurring in the lungs, brain, or liver; whether they exist in a minute or granular form, or in large, soft and yellow masses, or in the state of tubercular infiltration. I look on them as one of the first of those morbid changes depending on a peculiar constitution of body, and most commonly found to accompany it.

The weaker the constitution is, the greater tendency is there to generate tissues of a lower degree of vitality; and, on this principle, I think we can explain the occurrence of entozoa and hydatids. There are some cases in which you will never be able to prevent the generation of intestinal worms, until you direct your attention to the source of the evil, which lies in the weakness of the constitution; for, in such a state of the system, all animals are liable to the formation of parasitic productions and tissues imperfectly animalized. I look on tubercles in this light, and not as the consequence of inflammation, nor do I consider that it has been proved that tubercular development is the cause of phthisis. Many cases come under our observation, in which most of the symptoms of phthisis, and its attendant hectic, are manifest and striking, and, when the injury done to the lung is very great, still no tubercles can be detected.

That the mere presence of tubercular matter does not occasion inflammation of any kind may be inferred not only from the lungs, in which this fact is of every-day occurrence, and a matter of every-day observation, but also from finding them frequently in the spleen, liver, kidney, and muscles, where they must have existed for some time, and yet we cannot perceive any inflammation of the surrounding tissues. On the other hand, as we may have tubercles without any phthisical pneumonia or suppuration of the lung, so we have the latter without the former. Thus, in a man of middle age, who died lately in this hospital, the lungs were extensively solidified, black, and ulcerated, containing several sinuous cavities, filled with pus of a scrofulous character, but not a single distinct tubercle. There was not the slightest vestige of the chief kind of tubercle—the yellow one—nor could we find any of the small miliary transparent kind; the whole mass was solid except where it was suppurating, evidently the result of phthisical pneumonia of a chronic nature. Occurrences such as this have been frequently observed, and particularly in the phthisis of persons advanced in life, by Professor Alison and others; but the preconceived opinion, that the solidification of the lung was the consequence of tubercular deposition, made them overlook its nature.

The most important thing for the student to impress on his mind with regard to all cases of phthisis is, that the pectoral symptoms, of whatsoever nature they may be, are caused by scrofulous inflammation. If you trace the phenomena of external scrofulous abscesses, you will be struck with the close analogy they bear in their manner of appearance, their progress and termination, to the ulcerations of the lungs in phthisis. The same slowness, the same insidious latency, the same gradual solidification and gradual softening, the similarity of the puriform fluid secreted in each, the analogous occurrence of burrowing ulcers and fistulous openings, the close approximation in the form of their parietes, and the difficulty in healing remarked in both, make the resemblance between them extremely striking. Compare scrofulous inflammation of the hip or knee-joint with phthisical suppuration of the lungs:—have we not the same kind of hectic fever, the same flushings and sweats, the same state of urine, the same diarrhœa, the some state of appetite, and the same emaciation?

I mentioned before that one of the first morbid changes we generally see arising from the scrofulous habit is the formation of tubercular matter. I have also alluded to another of these morbid changes, namely, the production of scrofulous pneumonia, in which we cannot detect the existence of a single tubercle. There is another process in which the scrofulous inflammation is seated in the bronchial mucous membrane. This latter form of phthisis is sometimes associated with phthisical pneumonia, but it often exists without it. Although in this disease the inflammation is seated in the bronchial mucous membrane, it differs very much from common bronchitis; its symptoms are different; it does not run the same course, and it is unlike common bronchitis in its mode of termination and cure. Its fever presents all the material phenomena of phthisis—emaciation, and frequently the same incurability: the same means tend to its aggravation or benefit, and the same scrofulous pus is secreted.

It has been urged in opposition to the last analogy that the matter expectorated is not the same, because it is not found mixed with tubercles, as in cases of true phthisis; but this is an accidental and not a real difference, and does not disprove their identity. We have instances of this species of inflammation affecting other mucous tissues; as, for example, the scrofulous inflammation of the eyelids and conjunctiva, which we see sometimes going on for months, or even years, secreting a scrofulous pus, and requiring constitutional as well as local remedies for its cure.

In like manner we have frequent occasion to observe scrofulous sore throat, and scrofulous inflammation of the mucous membrane of the bowels. The latter is very common in children, and manifests its tendency to hectic, in what is termed the remittent fever of children. Its true scrofulous nature has been scarcely perceived by practitioners, and yet its treatment and cure contain manifest proofs of its origin, independently of the subsequent disease of the mesenteric glands observed in all fatal cases, and by all acknowledged to be scrofulous. It is scrofulous inflammation of the mucous membrane of the bowels which causes tabes mesenterica, and which occasions the swelling and puriform contents of the mesenteric glands in such cases.

The disease of the glands has been fairly regarded as the cause of the symptoms: where it occurs it aggravates and adds to them, but it is itself occasioned by irritation of the lymphatics distributed to the surface of the diseased bowel, on the same principle that a bubo or a chain of diseased glands in the groin may be occasioned by inflammation on the surface of the penis or lower extremities; in the axilla, by sores on the hand, arm, or chest; and in the neck, by cutaneous eruptions on the face or scalp, or by inflammation of the mucous membrane of the throat. In all such cases, if the original source of irritation at the extremities of the lymphatics leading to the gland be scrofulous, these glands will undergo precisely the same changes which we observe in the mesenteric glands in tabes mesenterica.

These analogies being considered, you will, gentlemen, be more disposed to agree with me in thinking that many of those cases of chronic bronchitis which induce a fatal hectic fever, and are accompanied by copious purulent expectoration, are truly of a scrofulous nature, and consequently not so distinct from tubercular phthisis as is generally believed. This view of the subject leads to most important practical results; for the practitioner who is aware of the true scrofulous nature of the pneumonia which occurs in phthisis, whether with or without tubercles, and who does not regard either the inflammation of the lung or of the bronchial tubes which accompanies tubercles, as genuine simple inflammation caused by the presence and irritation of tubercles acting as foreign bodies,—such a practitioner, I say, aware of the scrofulous nature of these affections, will pursue a line of practice very different from that too generally adopted on the supposition that they are true inflammatory affections.

You will remember, then, that we have three distinct forms of disease in the lungs, all arising from scrofula, namely, scrofulous pneumonia, scrofulous bronchitis, and the tubercular development. We may therefore have tubercles without either the pneumonia or the bronchitis; and we may have scrofulous pneumonia often ending in slow burrowing suppuration, and proving fatal without any tubercles being formed. In like manner a person may die of scrofulous bronchitis without the occurrence of either tubercles or pneumonia. Of these three effects of scrofula it may be remarked that, owing to their cause and origin being the same, they are most frequently found in combination. The same diathesis which produces one may give rise to the others; hence the frequency of their association; hence it is that they generally occur together.

I have stated that I doubted or even denied that tubercles were the cause of suppuration of the lung; you will ask me for proofs. In the first place, how many lungs will you find on dissection filled with tubercles, and yet there is no inflammation? Out of one hundred cases of tuberculated lung dissected by Laennec, you will remark that nearly eighty were found to be in the latent stage, and yet there was no vestige of inflammation. Now, how could this happen if tubercles acted like foreign bodies, as they are considered to do by many writers? If a grain of sand happen to get into the eye, it will excite inflammation. If tubercles were capable of producing inflammation, we should discover some traces of it in every lung where they are found to exist, and yet you will meet many cases in which you cannot detect the slightest trace of it down to the very edge of the tubercular mass. I instanced before the occurrence of tubercles in the liver, spleen, kidney, and muscles, without any accompanying or surrounding inflammation.

Indeed, I am adverse to allow that any animal product gives rise to inflammation: I do not speak here of unorganized calculi: I do not include those animal productions which are transferred to a part different from that in which they originated, as the matter of an hepatic abscess into the cavity of the peritoneum; these are occurrences for which nature is not prepared. But no animal matter produces inflammation of the part in which it is deposited; nor can I call to mind a single instance of such an effect. Extravasation of blood in the brain or lung, or into the areolar tissue, does not give rise to inflammation, neither does effusion of lymph into serous cavities. I look on tubercles in the same point of view, and consider them as productions incapable of developing the phenomena of inflammation.

The inflammation and suppuration of the lung to which the name of phthisis is applied, is dependent on a scrofulous habit, and thus leads us to inquire what it is that gives rise to the scrofulous diathesis. In many cases it is hereditary; persons may be born with it; and tubercles are frequently detected in the lungs of the fœtus. We may therefore say, that under some circumstances it is an hereditary disease. But it is not merely hereditary and existing in the fœtus in utero, but may be developed at any period of life. It is of great use to study and investigate the causes which produce this disease in the lungs of persons who have lived for years without any manifestation of tubercles, as it furnishes us with a key to understand why persons who have not originally either tubercles or scrofulous bronchitis may sometimes die of phthisis. It is too much the fashion to say that phthisis is an hereditary disease, and it is often useless and erroneous to lay too much stress on this opinion, and on the result of an inquiry into the habits of the parents and relations of a patient who is supposed to labour under consumption. That the predisposition may be generated in utero* I grant is often the case, and, *cæteris paribus*, a person with such a predisposition is much worse off; but I believe that it often happens that a man will get consumption by confiding too much in the purity of his blood, and I have known some cases of neglected cough terminate in debility and consumption, because the patient was not apprehensive of any danger, from the circumstance that none of his ancestors ever had the slightest taint of phthisis.

There are several facts in proof of this. If a tiger from the wilds of Africa, who can boast of a line of ancestors as free from phthisis as any of us, be brought into this country, and debilitated by confinement, impure air, and a climate to which he is unaccustomed, you will frequently find that he will die phthisical. Negroes, none of whose progenitors laboured under any form of phthisis, will get consumption in Great Britain. The same occurrence takes place with respect to monkeys and other animals, who are naturally inhabitants of a climate having a striking difference in temperature from that into which they are imported. You recollect the dromedary carried about for exhibition, which died in this city, and was dissected at the College of Surgeons: this animal died of consumption. The white bear of the North of Europe, and the Esquimaux dogs, brought into this country, die of liver disease, though I dare say there is no instance of hepatitis among those who dwell in their native wilds. Here we have instances of disease not at all hereditary, acquired from the action of the same cause that favoured its development when hereditary, and tending to justify the opinion that phthisis may, under certain circumstances, occur in a habit in which the slightest predisposition to this disease does not exist.

You will expect me, perhaps, to enter into a disquisition on the origin of tubercles; this, for obvious reasons, I must refuse. Much labour has I think been fruitlessly expended in attempting to systematize this subject. I am persuaded that there is much of error and misconception in the manner in which many persons consider the nature of tubercular formation. I am convinced that many of the propositions laid down as tenable and well-grounded may be subject to revision, or even doubted and denied.

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* Billiard has detected tubercles in the lungs of the fœtus.

It was supposed, for instance, that the yellow solid tubercle, one of the best defined of those which are found in the lung, commences in one form and terminates in another; that in the beginning it is small, solid, and transparent; that as it grows larger it becomes more and more opaque, and afterwards, under the inflammatory process, becomes softened in the centre and suppurates, the suppuration extending towards the circumference. This I was inclined to doubt, and we now find that all recent authorities agree in viewing this variety of tubercle as opaque, and of a dull straw colour from the commencement, and always undergoing the process of softening from the periphery inwards.

When you find, on dissecting a scrofulous lung, tubercles with fluid matter in their centres, I can scarcely think you are authorized in saying they have been at any period of their existence completely solid. Many years ago, while perusing Laennec's descriptions of tubercular formation, I wrote on the margin of the copy I was reading, *Might not tubercles have been originally fluid, and might not the change they undergo be from a soft into a consolidated mass?* I have seen this passage of fluid scrofulous pus into solid tubercular matter beautifully exemplified in a case of psoas abscess; the neighbouring lymphatics were loaded with pus; in the lymphatic glands to which it was next carried it was much thicker; in those at a greater distance it was of the consistence of curd, and when its fluid particles had been still more completely absorbed in more distant glands, it was found to be as solid as any yellow tubercle. May it not happen, that many of those yellow tubercles—and this is the opinion of Cruveilhier and others who have written on this subject since Laennec—at their commencement consist wholly of depositions of scrofulous pus in the tissue of the lungs?

One of the supposed tendencies of the scrofulous diathesis is to modify nutrition in such a manner that, instead of the ordinary depositions, a secretion of scrofulous pus takes place in circumscribed spots. It has been universally acknowledged that we may have depots of pus without inflammation. Now, if these depots be excessively numerous and very minute, and if they continue for any length of time, they will be exposed to the action of the surrounding absorbents; and as absorption will go on with greater activity at the circumference than at the centre, it is obvious that the solidification of the circumferential parts will precede that of the central, and they will present the appearance of tubercles softened in the centre. These facts I bring forward, not for the purpose of laying down any fixed theory concerning the growth and origin of tubercles; not for the purpose of asserting that the generally received opinion is wrong; but to show you that it has been too hastily adopted, to the exclusion of other explanations drawn from causes probably not less operative in giving rise to these morbid productions.

With regard to the more minute forms of tubercular matter, as the granular and transparent tubercle, and the tubercular infiltration, these I look upon as the effects of vitiated nutrition, a species of parasitic growths of a lower degree of organization, having their origin in an hereditary tendency or in a debilitated state of constitution. These may, and frequently do occur along with the yellow purulent tubercles, and they may have purulent points deposited in their centres, or at the circumference; but it may be doubted whether there is a true conversion or growth of one into the other, or, speaking more precisely, whether greyness, transparency, and minuteness of size in tubercles necessarily precede opacity, yellowness, and considerable bulk. The nearest resemblance which exists between the two kinds is in the case of tubercular infiltration, the grey species being imitated in its mode of diffusion by the purulent infiltration of the yellow kind.

The next subject for consideration is the examination of those causes which, acting on the constitution generally, or locally on the lung, give rise to the development of tubercles, scrofulous pneumonia, or scrofulous inflammation of the mucous membrane of the bronchial tubes. A great deal has been said concerning the badness of our climate, but it is necessary to know the comparative frequency of consumption in Great Britain, in order to ascertain the influence its climate may exercise in producing this disease as compared with that of other climates. If you examine the records of the German, French, Italian, and other continental hospitals, you will find that the occurrence of phthisical cases is not less frequent in these institutions than in the infirmaries of Great Britain. I do not mean to say that in these countries so many persons die in proportion to the extent of the country as in Great Britain, or that so much of the population, taking town and country into consideration, are cut off by phthisis as in Great Britain: but of the town population, where numbers are equal in both, I believe the proportion of victims is nearly the same.

The prevalence of phthisis is found statistically to depend on confinement, poverty, and vice; and as these are most abundant in the condensed population of towns, we can perceive why consumption is so frequent in this kingdom. In consequence of the great manufacturing prosperity of England, no nation in Europe possesses so many considerable towns in proportion to its entire population or extent. Now, when we compare the frequency of consumption in persons residing in large towns, and those who live in the country, the difference is very great indeed. This is not strange or unaccountable. Compare the peasants of any, even those shires which are believed to have the worst climates, in England, or even Scotland, and you will be at once struck with the contrast between them and the sallow artisans of large towns, who are crowded together in manufactories where ventilation is imperfect; where they are obliged to work in confined postures for many hours together, and the time devoted to amusement and healthful exercise is scanty and insufficient.

It is scarcely creditable the length of time even very young persons are made to work. From investigations made by a Parliamentary committee, it appears that until the last few years, when an Act of Parliament was passed restricting the hours of labour, every principle of humanity had been violated in some towns of England and Scotland. Children of six years of age used to be crowded together by hundreds in badly ventilated apartments, and obliged to work for seventeen hours in the day; and when these ill-fed and sickly creatures dropped asleep over their work, as they frequently did, from fatigue, exhaustion, and the curtailment of their natural rest, they were kept awake by strapping them with a leather thong over the back. And can we be surprised that this should make them spiritless, pale, and emaciated; and that they should sink rapidly into that state which tends to scrofulous development? Is it wonderful that in such creatures every disease of debility should manifest itself in tenfold vigour; that we should have phthisis in the lungs, and tabes mesenterica in the abdomen, and chronic hydrocephalus in the brain?

What applies to those of tender age is applicable also to the adult; the same mode of life is equally destructive to both; nay it even fixes its stamp on the race, and you can recognize at once the pale, unhealthy hue, and the stunted growth, of those whose progenitors have been manufacturers and artisans for generations. If the population of these countries lived in one great London, or one great Manchester, deprived of the benefit of pure air and wholesome exercise, I verily believe that they would all become scrofulous—that nine-tenths of them would get phthisis, and that scrofula, in its various shapes, would sweep them off in the course of a few centuries. Cholera or plague would be preferable to this.

But no manufacturing town supplies exclusively its own population; it generally draws from the country to support the losses it sustains by the general decay and excessive mortality of its members. It is the habits and circumstances of those persons who live in towns that produce the frequency of phthisis in Great Britain, for its climate is not more unhealthy than others. I mention this particularly, because a very prejudicial preventive method has been founded on the supposed inflammatory origin of phthisis. Confinement, heat regulated by the thermometer, flannel, low diet, and venesection, have been recommended as the best mode of managing phthisis. Now, if we complete the above catalogue by the liability to cold which it brings on, the mental anxiety, and many other circumstances, we have what in due time would make many persons phthisical. It is of great importance to know how to make a man phthisical, as, by pursuing an opposite line of conduct, we will be able to prevent it.

I have stated that I considered tubercles not as the cause of phthisis, but as the result of a certain diathesis, to which the name of scrofulous habit had been given; I should, however, be conveying an erroneous idea of the peculiarities of the disease, if I were to omit mentioning that whatever produces a tendency to the lungs gives rise to phthisical development. You will find in the works of Laennec, that he states that bronchitis never hastens the development of tubercles. I must in the most positive manner deny the truth of this statement. It is a very dangerous thing for a person of a scrofulous habit to get an attack of cold, producing catarrh, or inflammation of the lungs, as it has a direct tendency to bring on tubercular development and suppuration. If persons be weakly, unhealthy, and of a scrofulous constitution, and get cold and inflammation of the lungs, they are more liable to have consumptive suppuration of the congested than of any other portion of the lung; for the same reason that a simple injury, producing inflammation of the hip or knee joint in a scrofulous habit, may degenerate into true scrofulous ulceration of these parts. Hence common bronchitis in a scrofulous habit may become true scrofulous bronchitis, and common pneumonia may end in the scrofulous consolidation and burrowing ulceration of the lung peculiar to phthisis. And, notwithstanding the assertions of Louis to the contrary—assertions, too, supported by his numerical proofs—my own additional experience since I first promulgated this doctrine serves but to convince me the more strongly of its truth.

I am afraid, gentlemen, that you will think me tedious and guilty of repetition on this subject; but its importance is paramount, and I wish to impress on you that every form of phthisis is connected with scrofulous inflammation of the lung. Compare scrofulous and long-continued inflammation of the knee or hip-joint and their attending symptoms with the symptoms of phthisis. Have we not the same fever, the same sweats, the same diarrhœa, the same emaciations, the same state of urine and pulse? Are not all the symptoms which attend these diseases, I mean the general and constitutional symptoms, identical? Let me observe that there is not one of those cases in which you will not be able to trace the existence of scrofula, and I trust that you will assent to this proposition, that the inflammation of the lungs in phthisis is scrofulous.

You may be inclined to doubt that there is such a thing as scrofulous bronchitis, but let me remind you that there are cases of persons in the decline of life who have long-continued cough, purulent expectoration, emaciation, sweats, hectic fever, and diarrhœa; and when you dissect one of those persons, you find the mucous membrane of the bronchial tubes red and hypertrophied, and a great quantity of purulent fluid in the lungs, but not the slightest trace of tubercle. You may say, I have made here a good diagnosis; this person had died of chronic catarrh; but this is improper; many of those cases are scrofulous inflammation of the bronchial mucous membrane. You will generally observe that such cases are much more difficult of cure than mere bronchitis; that the same treatment, the same regimen, the same attention to change of air, and tonic and strengthening diet will not do.

No one dies from an attack of common bronchitis except the very aged, or persons in whom it is very general and very acute; and here its rapid termination sufficiently distinguishes it from the form I have described; but we have repeated instances of bronchitis lasting for months without destroying the patient, and capable of being removed by the ordinary means, except when it occurs in a scrofulous diathesis. It is obvious that phthisis may prove fatal by the rapid and extensive development of tubercles, without any of the peculiar phenomena of pneumonia or bronchitis; yet it most commonly happens that owing to their being produced by the same cause, we have the three different forms of scrofulous inflammation in the same phthisical patient, although it is by no means rare to meet with them in a separate and distinct state.

Another way in which inflammation acts as a cause of tubercular development I must not omit stating, namely, by bringing more—generally unhealthy—blood to the lung, and thus encouraging the formation of morbid deposits; and this leads us to the consideration of another question, why are tubercles so common and so copious in the lung more than in any other tissue? I believe there has not been as yet any satisfactory solution of this phenomenon; but it may tend to throw some light on this obscure subject, if we call to mind one of the most striking peculiarities of the lung, namely, that it is the only organ through which the entire mass of the blood circulates. Through other organs a portion only of the blood is transmitted; but the whole current of the circulation passes through the lungs.

It is in the lungs also that the change which the blood undergoes takes place exclusively, and its particles experience that mutation which renders them subservient to the purposes of life. Whatever has been added or subtracted from the blood by the processes of sanguification or secretion is corrected by the operation which it undergoes in the lungs, and hence they stand in relation to the blood differently from other parts. They receive, transmit, and produce changes in the blood differing from those it experiences in any other organ, and this may, perhaps, account in some way for the frequency of tubercles in the lungs. Tubercles are a disease of nutrition, a process which depends intimately on the blood; and it may not seem strange that they should be most frequent and numerous in an organ which has a more intimate connexion with the sanguineous circulation than any other.

I have stated that in persons of scrofulous habit, whatever produces congestion in the lung is liable to bring on phthisis, and hence it is that tubercles are found to succeed the different forms of the chest disease in which congestion of the lung is a general feature. It is not that more blood passes through the uninflamed portion, or that it receives more than the sound part. On the contrary, perhaps one hundred times as much blood is transmitted through the healthy part, but the mode in which it passes is very different. It passes rapidly and freely through the uninflamed portion of the lung, and is aërated on its passage; but in the inflamed part the blood is retarded in its progress, and, comparatively speaking, stagnates; it is, as it were, out of the general current of the circulation, *hors de la route;* it becomes diminished both in its velocity and quality, because the unsound and disorganized portion of the lung is unable to effect those vital changes which depend on the perfect state of its functions. Hence, you perceive that whatever increases the stagnation of blood or the engorgement of the lung brings on a state of that fluid in which there is both detention and imperfect aëration, circumstances which are apt to produce not the nutrition of the organ in which they occur, but the formation of morbid depositions, and this appears to be the reason why inflammation and engorgement occasion tubercular development.

With regard to the time of life at which phthisis is found to occur most frequently, Lombard, Alison, Andral, Papavoine, and Louis have corrected some important errors in the opinions previously existing on this subject. From their investigations, it appears that, from one to two years of age, tubercular consumption is very rare, that its frequency increases from four to five—from four to seven, according to the two latter observers—that it then remains nearly stationary until puberty, when the tendency to tubercular development is suddenly revived. As old age comes on, this tendency diminishes, and tubercular consumption is of a comparatively rare occurrence, but scrofulous inflammation of the lungs is then also not unfrequently noticed. In the consumption of young persons we most commonly meet with tubercles on examination after death, but in old people tubercles are seldom found; and in dissections of those who die of phthisis at an advanced age, we generally observe ulcerations, abscesses, fistulous communications, and consolidation of various parts, with quantities of scrofulous pus. Such was the case of the man who died here some time since, in whom the ravages committed by scrofulous ulceration were very extensive, but there was not a vestige of tubercle. This form of phthisis is also frequently noticed in persons of middle age, who have lived intemperately and weakened the system by dissolute courses.

Before leaving this part of the subject, I wish to make some additional observations on the phthisical habit, and the circumstances which increase the liability to consumption. There are many circumstances which tend to the development of phthisis, through the medium of their influence on the constitution. In the first place, persons who have had debilitating and protracted fevers, particularly if there be any affection of the lungs, are very apt to fall into what has been termed a galloping consumption after the subsidence of the fever. In the next place, you will often find symptoms of phthisis coming on in females of a weakly habit when they attempt to nurse. In many females of delicate constitution, you are aware that the progress of consumption is checked by utero-gestation; as soon as the female becomes pregnant, the phthisical symptoms disappear; but when she begins to nurse, they return again in an aggravated form. When such persons begin to nurse, you should watch the effect of this new drain on the constitution; you should observe whether their strength diminishes; and if you find them becoming pale, thin, and emaciated, you should make them give up nursing, particularly if there be a tendency to phthisis in their habits.

Among the male sex, nothing more frequently produces phthisis than syphilis and the abuse of mercury. There is no receipt more infallible than this for producing consumption. Take a young man, even with an excellent constitution, who is labouring under syphilis, shut him up in a close room, dose him with mercury, put him on low diet, and prevent him from the enjoyment of fresh air, wholesome exercise, and enlivening conversation, and you will certainly make him phthisical, if this process be often repeated. Other diseases, such as diabetes, cancer, diarrhœa, insanity, hypochondriasis, and hysteria have also a tendency to bring on consumption.

If you consult Laennec, you will find enumerated among its causes, mental anxiety, depression of spirits, and several diseases which frequently lay the foundation for phthisis. In speaking of some of the religious orders in France, particularly those to which females are attached, he says that it is to be lamented that they were so unreasonable in their mode of life; for the confinement, and want of recreation and exercise, which attend their mode of living, concurring with their rigid abstinence, produce consumption in a few years. You should bear those circumstances in mind, and remember that there are various causes which tend to the development of phthisis, among which you are not to forget those which operate on the system through the medium of the mind.

Analogous to this is that ill-judged pursuit of knowledge which we often, with regret, observe to cut short the earthly career of the industrious medical student. No matter how vigorous a young gentleman may be, he will make himself consumptive in two or three years if he chooses. Let him remain constantly in the dissecting-room, or in attendance on lectures, keep his mind intensely and anxiously engaged, let him snatch a hurried meal for which he has no appetite, take no exercise, and abridge his natural portion of sleep, he will quickly bring on that state of constitution in which the consumptive tendency so commonly appears. By pursuing this course of life many young men fall victims to phthisis at an early age, and give melancholy proofs of the power of a combination of mental and physical causes in producing this disease.

LECTURE XLV.

PHTHISIS.—PREVENTION.—TREATMENT.—LARYNGEAL PHTHISIS.

In my last lecture I spoke of phthisis as regards the great mortality it occasions, of my views as to the nature of tubercle, and of the causes by which it is produced. I shall proceed now to offer some observations on the treatment of the disease.

You will, probably, ask me first what is to be done in order to avert the phthisical tendency. It was formerly thought that consumption arose from inflammation of the lung, and on this erroneous reasoning was founded its preventive treatment; the patient was confined to his room, and kept in an equable temperature, wrapped up in flannel. I well remember this mode. If a family lost one of its members by consumption, these were the means employed to avert its occurrence in those who remained. This absurd plan was followed with rigorous exactness, and the constitutions of the survivors were so debilitated thereby, that they became similarly affected, and in time the whole were swept away.

All these precautionary measures generally tend to the same purpose, to make the constitution delicate, and consequently more liable to the inroads of phthisis. A rational physician will endeavour to prevent its occurrence, not by confining his patient, and wrapping him in flannel, but by hardening him against cold. Any one who wraps himself up and confines himself within doors, takes cold in tenfold proportion to the person who dispenses with superfluous covering, washes his chest with cold water, and rises early in the morning. Habits such as these, with a good, nutritious, but not stimulating diet, and exercise, are the best preventives of phthisis.

Make your patient lay aside slops and tea; let him take wholesome fresh meat, bread, and good beer; let him rise early and breakfast early, let him dine also early; when the weather permits, let him remain in the open air for four or five hours, taking exercise on a jaunting car, or on the top of a coach. The good diet will invigorate the system, and, so far from producing inflammation, will do exactly the contrary. No superfluous muffling should be used, nor would I recommend young gentlemen who wish to avoid cold, to come to hospital in the morning with a boa round their necks. Exercise should also be taken on an open vehicle, close carriages avoided, and the patient should commence cautiously the plan recommended by Dr. Stewart, of Glasgow, of washing the chest with vinegar and water, beginning with it warm, and reducing the temperature gradually until it can be used completely cold.

You will have great success in preventing phthisis by following this plan. In all cases, also, where phthisis is hereditary, I would strongly recommend the insertion of issues or setons in the chest before or after puberty, and I am of opinion that if you happen to have an application made to you for advice before the disease commences, you will certainly avert its occurrence by this practice. You should, however, employ this mode of treatment with due consideration; issues and setons are very unpleasant things, and you should not make your mode of prevention more powerful than necessary. The only cases in which you are authorized to have recourse to them, *as preventives*, are those in which there is a family predisposition to phthisis.

I look on issues and setons as one of the most important means in the prevention, if not in the treatment of phthisis. Their utility in diseases of the hip-joint and spine has been long acknowledged. It is the knowledge of this fact which induces me to recommend them in phthisical cases; I consider their value very great; and when I employ them, I generally recommend a nutritious diet, which is of advantage where there is an outlet for matter from the system. I never treat a case of decidedly incipient phthisis without inserting at least two setons under the collar-bones. The following observation, made by an intelligent medical friend, is deserving of attention:—"I had inserted a seton over the left mamma, where bronchial rales, diminished respiration, and commencing crepitus indicated advancing tubercular inflammation. The stethoscopic phenomena were much increased every time he caught cold in his chest, and he felt sensibly, by the wheezing and uneasiness in that part of his chest, that whenever he caught cold, the lung there was most engaged. The effects of the setons were such that, in the course of three months, having contracted a severe cold, that part of the lung was comparatively free from the bronchitis." For the accuracy of this fact I can vouch.

Concerning the climate to which we may find it necessary to recommend a patient to remove, either for the preservation or alleviation of phthisis, I shall now offer a few remarks. When you enjoin a change of climate, and make persons leave the country in which they have lived from infancy, you should not send them to the same, or nearly the same, climate; the change should be a completely opposite one. Italy, the south of France, or Madeira, are not sufficiently different. It is absurd, in my mind, to send a patient from the British Islands to any part of the continent of Europe. Towns on the sea-coast of any part of it will not do; I would prefer the East or West Indies, South Carolina, or Florida, the northern states of South America, or Egypt. Many improvements in the social condition of the last-named country tend to render it a desirable place of residence; and if the present enlightened Pacha continue to promote the advantages which it has gained, it will become as agreeable a place of residence as any person can desire. Moreover, Clot Bey has confirmed the statement of Savary, that in Egypt pulmonary diseases are almost entirely unknown.

A singular fact has been recently noticed as to the antagonism which appears to exist between ague and phthisis. From the investigations of Boudin, Triber, Wolheim, Wœmer, and others, it would appear that consumption is almost unknown in what may be termed aguish districts; and, on the other hand, that in those parts of a country in which phthisis prevails, cases of ague are not met with. If further observations confirm these statements, we should, of course, take them into account in selecting a climate as a place of residence for the consumptive invalid.

I come now to speak of the treatment of phthisis itself, and shall make but very few observations on this subject, for you will find the history of its general symptoms, stethoscopic phenomena, and method of treatment, amply detailed in books. With regard to the cough, I may remark, that in the first stages of this disease it presents great varieties, being generally in the commencement baffling, and consequently scarcely noticed either by the patient or his friends. In some it precedes, in others it follows, a notable degree of emaciation and debility; and it is worthy of notice, that it is not unusual for the patient to complain of increased perspirations at night, long before the pulse is at all accelerated, long before the symptoms of hectic fever have commenced. These night-sweats are, at this period of the disease, the result of that debility to whose presence the subsequent development of phthisis is mainly owing.

At a subsequent period, the sweats are increased by the hectic fever, whose paroxysms end in cutaneous perspiration. Still, however, the original debility aids in their production, a fact which, in the treatment of this disease, should be borne in mind, for it may be considered as always proper to check this tendency to perspiration in phthisis, particularly in its commencement, for it uselessly debilitates the patient, and renders him much more liable to cold. Hence, when a patient applies to me, complaining of some debility, and a slight degree of emaciation, and fading of healthy appearance; if he has had a slight but by no means troublesome cough for several weeks—a cough, indeed, which he scarcely observes himself, but which excites the fear of some anxious friend; if, in addition to this, he sweats rather more than usual at night, then, although his pulse is quite tranquil, although there exists no trace of hectic fever, yet I immediately direct my treatment with a view of checking this tendency to night perspirations, as well as the other more prominent symptoms.

To such persons I generally recommend some such draught as the following, to be taken three times a day :—

℞. Infusi Cascarillæ, f℥vij;
Sulphatis Quinæ, gr. ss.;
Acidi Sulphurici diluti, gt. xv.;
Tincturæ Hyoscyami, f℥ss. Misce, fiat haustus.

These draughts, together with constant gestation in the open air for an hour and a half at a time, and several times a day, with nutritious diet—meat, bread, and beer for breakfast, meat for luncheon, and a dinner, with one or two glasses of wine, and no tea in the evening—will soon check the perspirations, diminish the cough, and rapidly recal the patient's strength and vigour. Many German physicians have an aphorism, that sulphuric acid tends to increase pectoral affections. So it occasionally does; but given combined with hyoscyamus, as above recommended, its beneficial action in giving strength and tone to the constitution soon enables the patient to shake off the cough.

In the month of January last, I recommended this prescription and general treatment to the eldest son of a gentleman of rank. His state was exactly what I have above described, and several of his mother's family had died of consumption. In a few days his mother-in-law called at my house, and in the course of ou conversation it became clear that she entertained very stron prejudices against the treatment I had recommended. Suc persons, gentlemen, are all well acquainted with sulphate o quina; ladies of fashion use it constantly to wind themselves up when reduced to a little below par by dissipation and late hours What use could sulphate of quina be to a cough? Might h not catch fresh cold from driving out at this season? Woul not the meat diet tend to increase the pectoral affection?

Luckily for me, this lady lived at the time in a country house the nearest place to which had, many years ago, been th residence of one of our richest merchants, a gentleman with a ver numerous family, eleven of whom had died of consumption. M answer to the lady was, therefore, obvious. I replied, to preven consumption, or to remove its first stages in that family, th most eminent physicians recommended a certain regimen an mode of treatment. They were anxiously confined within door during winter, kept wrapt up in flannel in rooms maintained at *Madeira* temperature, were not allowed animal food, and wer bled to the amount of a few ounces at each accession of fres cold. You, yourself, know the result, madam:—they all fe victims to the complaint, and appeared to drop more rapidly i consequence of the treatment. I am pursuing, in the case your son-in-law, an opposite course. She was satisfied, and th young man is now strong and healthy.

In spring, 1832, I was consulted by a young barrister wh was affected in nearly the same manner, but, in addition, had hoarseness and much more violent cough, and was more emaciate The same regimen, the same medicines, the solution of nitrat of silver applied to the tonsils and pharynx, early hours, remov to Bray, and driving through the open air twenty miles a da restored him to health. Being now aware of what injures hi he avoids everything debilitating, never neglects exercise, and i now strong and able to pursue his professional avocations. Agai let me repeat it, that if the disease be at all more advanced than it was in these two cases, I immediately insert one or two setons over the most suspected part of the lungs. When the preparations of hyoscyamus are well made and good, they are extremely useful, and, like digitalis, exert a retarding influence over the pulse when it is accelerated.

When the pectoral symptoms are accompanied by evident fever and a quick pulse, I generally combine these two substances, as in the following formula :—

℞. Sulphatis Quinæ, gr. iss ;
Acidi Sulphurici diluti, fʒj ;
Tincturæ Hyoscyami, fʒj ;
Syrupi Papaveris albi, fʒss ;
Aqnæ fontanæ, f℥iv ;
Fiat mistura, sumat cochleare unum amplum secundâ quâque horá.

As the disease advances, the difficulty of producing a favourable result increases in tenfold proportion ; and I can offer but few remarks upon its treatment or mitigation which you will not find detailed in the various treatises on this disease lately published. I must, however, call your attention to a plan which I have adopted within the last six or seven years, in the treatment of certain diseases of the lungs, and on which I shall make a few observations, as it has not been spoken of by those who treat of the cure of pulmonary affections. I must here in justice confess that the idea of this plan of treatment is not solely mine, but was founded on an analogy derived from the researches and experiments of Dr. O'Beirne on scrofulous inflammation of the joints. An extensive experience and deep reflection first led Dr. O'Beirne to think that the acute stage of scrofulous inflammation of the hip and knee-joint might be made amenable to active and energetic treatment; in other words, that inflammatory affections of the joints, which terminate in some of the worst and most fatal forms of disease, namely, morbus coxæ and white swelling, might be checked *in limine*, and before the stage of hopeless ulceration was established. He, therefore, proceeded boldly and at once to try whether the disease might not be arrested in the commencement by rapid mercurialization.

Observe, gentlemen, this idea was completely new; it had never occurred to any other person, and was diametrically opposed

to the theories of the day. The prevailing opinion o
subject was that mercury was inadmissible, and could onl
duce mischief in persons of a scrofulous diathesis.

Every one said, do not give mercury in such a case, it e
bates scrofula, it even brings on scrofula in many instances
there had been no appearance of it previously; you can
good with it, and may do infinite mischief. Dr. O'Beirne,
ever, knew the difference between the proper and im
exhibition of mercury—between mercurializing the pati
once and fully, and then stopping, and the pernicious cust
giving long and irregular courses of mercury. He trie
remedy and succeeded, and the surgeons of Europe have
appreciated the value and importance of his discovery.
two or three months before Dr. O'Beirne made his disc
public, I had translated for the *Dublin Medical Journal* a
from a German author on the use of corrosive sublimate in
in the treatment of white swelling, and Dr. O'Beirne state
the publication of this paper gave him courage at the ti
pursuing a plan of treatment so much at variance wit
opinions of the day. I published this paper, however, a
time merely as a curiosity; it was a novelty in practice of
I had no experience, and could not offer any explanation.
was reserved for Dr. O'Beirne. He has shown in his mem
the subject, that if you give mercury so as to affect the s
rapidly, you will frequently succeed in curing the disease,
ticularly in the commencement.

From this I was led by analogy to apply the same princi
treatment to incipient scrofulous inflammation of the lung
I think I have often succeeded in checking at once this
formidable of human maladies. Phthisis, as every medical
knows, is capable of assuming a variety of forms, and pr
at its origin much difference of aspect. In some it arises s
and insidiously, and the pulmonary symptoms are so q
and gradually developed that it would puzzle an intell
practitioner, who had most ample opportunities of observin
patient from the beginning, to say at what particular period di
evidence of danger had been noticed. The reason of this i
cause the tubercular affection of the lung is in such patient
of secondary importance, the disease which produced it h
affected the whole system before the lung was contaminated

This happens in some, but in others an opposite train of phenomena is observed, and scrofulous inflammation commences in the lung before any general contamination of the system has taken place. It is in such cases, and such only, that mercury ought to be tried, and it will avail nothing except where the commencement of the scrofulous inflammation of the lung has arisen suddenly, and in consequence of the operation of some obvious cause, as catching cold or the occurrence of hemoptysis. I think that too much stress has been laid on the affection of the lung by writers on phthisis. In some cases (I will admit even in the majority of instances) the disease commences in the lung, but in others it passes through many changes, and affects various organs before it attacks the lung. You will frequently see persons labouring under scrofulous irritation, accompanied by hectic, emaciation, loss of appetite, and excitement of pulse, long before you can find any trace of tubercular deposition in the lung. I am of opinion that many persons would die of phthisis even supposing they had no such organ as the lung.

But let us suppose the case of a person of scrofulous habit who gets an attack of fever, with local inflammation, and that this inflammation fastens on the lung. Take for instance the following case: a young man of robust and vigorous frame, but evidently of scrofulous habit, who has laboured repeatedly under scrofulous ophthalmia in his infancy, and who has lost several members of his family by consumption, gets, we will suppose, a severe cold by overheating himself in walking into Dublin from the country on a damp evening. He is attacked next day with feverish symptoms and severe catarrh, which soon becomes a formidable bronchitis; but the young man being of a vigorous habit and fond of company, continues to go out and expose himself to the night air, until at length the catarrhal fever is changed into hectic, the bronchitic into organic disease of the lungs, tubercles become developed, and the disease passes into phthisis. Here, you perceive, a man gets an ordinary cold which becomes a bronchitis; he neglects this, and it passes into disease of the pulmonary tissue and tubercular ulceration.

Now this is a very common course of diseased action in persons of a scrofulous habit, and I have in many such cases been able to trace the fatal malady to a common cold exacerbated by neglect and bad treatment. You perceive I do not use the ordinary nomenclature of writers on consumption ; I do not cognize the terms "tubercular inflammation," as connected w cases of this description; indeed, I am inclined to think t the whole theory of inflammation being excited in the lung the presence of tubercles is founded on erroneous views. have repeatedly found tubercles in the lungs of persons died of other diseases, without any trace of inflammation aro them, and I believe every pathologist will confirm this st ment. From this and other reasons I have been led to conclusion that tubercles do not act in all cases as for bodies, and that the theory which attributes the origin of infl mation to their presence is wrong. In my last lecture I h brought forward numerous arguments to show that we ar possession of a much truer and more intelligible patholog explanation of the fact in question.

You may have scrofulous inflammation of the bronc mucous membrane, or you may have scrofulous inflammatio the lung singly or combined, or, what is most frequently case, you may have either or both accompanied by tuberc development. The development of tubercles, however, in a of scrofulous bronchitis or scrofulous pneumonia, is a coincid and not a cause; and you may have either of these affect singly or combined, without any co-existent or preceding tu cular development. Most commonly scrofulous bronchitis scrofulous pneumonia are conjoined; the former seldom e for any length of time without producing the latter, and latter is usually attended with more or less derangement of bronchial mucous membrane.

But what I chiefly wish to direct your attention to on present occasion (and it is a matter of the deepest importa is, can we prevent the development of phthisis in a perso scrofulous habit who has caught cold, got a dangerous atta bronchitis or pneumonia, and is threatened with hectic? not wish to enter again into any disquisition concerning the m to be adopted with the view of preventing tubercular depositi or producing absorption when tubercular matter has deposited in the tissue of the lung. To prevent tuberc depositions you must cure the scrofulous diathesis if you ca

But suppose you are called to a case of the kind I already described, where a young man of scrofulous diathesis a bad bronchitis or pneumonia, exacerbates it by neglect, and is threatened with hectic, what is the best plan you can pursue? My impression is, that you should treat it as you would treat acute scrofulous inflammation of the knee or hip-joint; in other words, that you should mercurialize your patient rapidly and at once; do it suddenly and decidedly, but without pushing the mercury too far, and you will often arrest all the symptoms of the disease, as it were by a charm.

I could mention many cases which have been treated successfully in this way. I was very much struck by the case of two eminent medical practitioners who came to Dublin some years since, to place themselves under the care of Dr. Stokes and myself. One was a person of scrofulous habit, who had caught cold after taking mercury, and neglected it for three weeks. At the time we saw him he laboured under severe and harassing cough, considerable fever and emaciation, and was greatly alarmed about his condition. He had been several times leeched over the trachea by Dr. Stokes; but this, although an admirable remedy in many cases of bronchitis, failed in producing an amelioration of his symptoms, and from the persistence of his feverishness, emaciations, and harassing cough, serious apprehensions were entertained that his disease would terminate in phthisis. Having explained to our patient our views of the case, and our impression that mercury was the only remedy on which we could rely with any hopes of success, we ordered him to confine himself to his room, continue the application of leeches to the trachea, and take mercury.

Now, as this gentleman had come up to town under the impression that he was consumptive, we found some difficulty in persuading him to submit to this mode of treatment. He yielded, however, but with great reluctance. In the space of a week all his bad symptoms had nearly disappeared. As soon as he came under the influence of mercury, the cough became notably diminished, and he recovered flesh and strength with surprising rapidity.

The other was a physician from the north of Ireland, who was suddenly attacked by pulmonary apoplexy, and in a few weeks came to Dublin, harassed by a constant dry cough, which prevented sleep at night, and he was visibly emaciated and anxious. In him no hereditary tendency to phthisis could be ascertained, but nevertheless Sir Henry Marsh, Dr. Stokes, and I considered the case as very unpromising; for although there was no acceleration of the pulse, the breathing was easily disturbed, and we could detect crepitus and some dulness above the right mamma, where it was evident the original seat of the hemorrhage had been. This case, too, which had resisted a mere antiphlogistic treatment, yielded in a most satisfactory manner to mercury.

Bearing these facts in mind, I think, gentlemen, you will be prepared to admit that mercury is a most valuable remedy in the treatment of scrofulous bronchitis and scrofulous pneumonia—diseases which too often resist the ordinary modes of treatment, and which are unfortunately so often followed by fatal disease of the lung. Where a sudden attack of cold has produced inflammation of the substance or lining membrane of the lung in a person of scrofulous habit—where the attack is recent, and has occurred under circumstances which preclude any suspicion of previous tubercular disease—in such a case as this you will find mercury a most admirable remedy in checking symptoms often not amenable to other plans of treatment, and which if neglected or maltreated would in all probability end in phthisis.

I was led to the adoption of this plan, as I before observed, by the success which has attended Dr. O'Beirne's practice in acute scrofulous inflammation of the joints, and from observing that cases of unmanageable chronic bronchitis had been occasionally cured perfectly where mercury had been exhibited for other affections; and it is a curious fact that about the time I had fallen upon this mode of treatment, it suggested itself likewise to the minds of Dr. Stokes and Sir Henry Marsh, who can testify to its utility; of course it will not succeed in all cases; and I have seen it fail in others where I had confidently expected benefit. Notwithstanding this, it is a most valuable addition to our resources in certain cases that would end in phthisis.

About a year ago I attended a young gentleman, apparently of robust constitution, who died of phthisis ushered in by a frequently recurring hemoptysis. Shortly after his death, I was called on to visit the elder brother of my former patient. He had a constant hard, dry, and very distressing cough, which deprived him of sleep, and having continued many weeks had produced a most formidable degree of emaciation. Consumption was naturally dreaded. His pulse, however, was normal, and the stethoscope did not indicate any pulmonary lesion; still, as the case had refused to yield to all the ordinary remedies, including change of air, we felt very apprehensive as to the result. I confined him to bed, applied leeches over the trachea several times, and rapidly mercurialized him, and with complete success. He has continued well ever since.

I have employed this mercurial plan of treatment in numerous cases of incipient phthisis, and I still continue to use it in this class of cases with the greatest success. It has also been adopted by others, amongst whom Dr. Munk must rank foremost, for the great attention he has paid to the action of this remedy in the disease in question. This gentleman's communication first appeared in the *London Medical Gazette*, from which it was transferred to the pages of the *Dublin Medical Journal*, for March and May, 1841, and I would strongly recommend it to your careful perusal.

Let me now impress on you strongly the necessity of never abandoning cases of consumption as hopeless; for I have known several apparently desperate cases cured, even when puriform matter had been expectorated, a cavities existed. Many remarkable cases of phthisis have occurred in my own practice, and the practice of Dr. Stokes, and in which the patients recovered either temporarily or permanently in a manner quite unforeseen and unexpected. In some, recovery took place after the occurrence of abundant tubercular deposition and crepitus, and in others, after the formation of tubercular cavities.

When the disease was produced by the operation of accidental causes in constitutions apparently sound, the recovery was not so surprising; but we have witnessed recoveries in many of a phthisical constitution, and several members of whose families had previously fallen victims to consumption.

Facts such as these ought to prevent the practitioner from placing too great reliance upon stethoscopic examinations, as a positive means of prognosis; for it may be looked upon as established, that phthisis, like most other diseases, *does not always necessarily progress to a fatal termination.* With this exception, I fully concur in the opinion of the editor of the *Medical Gazette*, who expresses himself in the following manner:—

"It accords, we are bold to say, with the experience of every practitioner who has watched even a few cases of phthisis to their termination, when we remark that the march of the disease, its disposition to assume a slow or a rapid course to its fatal issue, can never be predicted from the most precise acquaintance with the structural changes that have occurred. And what is still more important to notice, the constitutional effects do not bear any intelligible relation, in severity, to the amount of destruction of the organ in which the disease is situated. These facts show impressively, without stating any others, how much requires to be ascertained, independently of measuring out, with nice accuracy, the extent of morbid changes in the particular viscus considered as the seat of the disease, before we can have any correct notion of the nature of the agent, whose destroying, and, at present, irresistible influence we vainly endeavour to combat in our practice."

In my last lecture I stated that the premonitory cough of phthisis is generally trifling, and scarcely attracts the notice of the patient himself. This, however, is not always the case. Thus, the lamented Mr. Wolfe, the author of the celebrated stanzas on the death of General Moore, had, for a year before emaciation and hectic commenced, a frequently repeated, single cough, exceedingly loud, ringing, and metallic—in fact, a *tussis firma:* during this time his pulse was natural and his breathing tranquil. Nothing that the ingenuity of Dr. Cheyne could suggest was of the least service in allaying the violence of the cough: nothing softened it, until it passed into the usual cough of true consumption, and then we too truly anticipated the loss Mr. Wolfe's friends must prepare themselves to sustain.

I have seen a *tussis firma*, such as I have described, perfectly dry, uninterrupted during sleep and very harassing, in young ladies shortly after the age of puberty, and in whom the menstrual evacuation was scanty and irregular. In such cases the stethoscope discovers no disease; a full breath can be drawn; and during sleep the respiration is not hurried. The tonic treatment consisting of large doses of carbonate of iron; the occasional exhibition of oil of turpentine, repeated for several days so as to act on the bowels, and given in as large quantities as can be borne;—these medicines, I say, combined with active exercise, the occasional use of aloetic purgatives, and finally the exhibition of tincture of cantharides, compound tincture of bark, and camphorated tincture of opium, according to the following formula, will succeed in curing the disease :—

℞. Tincturæ Cinchonæ compositæ, f℥v;
Tincturæ Cantharidis;
Tincturæ Opii Camphoratæ, ana, f℥ss; Misce, fiat mistura.

Of this mixture, two drachms may be taken three times a day, and gradually increased to half an ounce, in linseed tea or barley water. I was the first to propose this mode of treating this species of cough; it suggested itself to me after all the usual remedies had failed.

I wish you to bear in mind, gentlemen, that phthisis is sometimes latent, not alone from the fact of its being often unreognizable by physical signs, but also from its occasionally not resenting a *single symptom* belonging to the disease up to the ery moment of death. Of this the following case, to which I efore referred when speaking of epilepsy, is a good example :— young lad, shortly after having eaten a great number of pears, rank a considerable quantity of buttermilk, and fell into a state f insensibility : he was visited by a physician of eminence, who ought it advisable to open the temporal artery. About seven ours after the attack a hard tumor was felt in the epigastrium, hich gave rise to the suspicion of the presence of undigested bstance in the stomach. Purgatives were given with a favourable sult, the tumor subsided, and the boy recovered his senses.

The fit, however, returned, and after some time he became bject to regular attacks of epilepsy, which became of more equent occurrence every successive year, but six years elapsed fore his intellect was at all impaired : he then became first ull and stupid, then idiotic, with occasional glimpses of reason n subjects connected with religion. The fits were preceded by n aura, and followed by coma. Twice a year the disease was bject to most violent exacerbations, the fits recurring as often s ten times a day, and being followed by outrageous madness, hich was generally a sign of the subsidence of the fits. When e mania subsided he relapsed into his ordinary state, and had w and comparatively slight fits, but after each of the violent aroxysms he had epistaxis. His respiration was regular, and e had no symptom of pulmonary disease. During the last four or five years of his life the fits were less frequent, and he was free from mania: in 1833 he had an attack of jaundice. His death seemed to be caused by a severe diarrhœa, which set in two months before the fatal termination.

Upon examination, the brain and spinal cord, with their membranes, were found healthy, with the exception of a very slight effusion beneath the arachnoid; the cause of the diarrhœa was found in an extensive ulceration of the ileum. On opening the cavity of the chest, the left lung was found to be one solid mass of tubercles, and the superior third of the right was in the same condition; there were also several small cavities; the gall bladder was exceedingly small, contracted, and filled with calculi. Now the most remarkable feature in this case was, that the patient had never any affection of the respiration, cough, or any other symptom from which the existence of pulmonary disease could have been suspected.

The next case to which I shall call your attention is an example of latent ulceration of the bowels in phthisis; it enables me to bring before you the morbid appearances in a far advanced case of tubercular consumption. It is that of M. Murphy, who died on Saturday last. This man, aged 60, was admitted on the 1st of November. He had been ill for nine months before his admission, and stated that his illness originated in exposure to cold. It commenced with cough, oppression of chest, dyspnœa, and hemoptysis. During the first month, the hemoptysis recurred frequently, and, as he thought, generally with more or less relief; but during the latter period of his illness it was entirely absent.

On his admission, he had well-marked hectic fever, with copious puriform expectoration, and appeared very much emaciated. The right clavicle sounded pretty clear, but under the left clavicle there was well-marked dulness, with a full mucous rale approaching to gargouillement and pectoriloquy. The two latter symptoms became much more decided in about a week after his admission, and I accordingly marked on his card "Phthisis Senilis." The only other circumstance connected with the history of his case which deserves attention was, that he laboured under constant costiveness, which continued up to the period of his death, his bowels never yielding except when he used purgative medicines.

It is unnecessary for me to enter into a detail of the remedies nployed to alleviate his symptoms—the only duty which mained for the physician under such circumstances; I shall erefore content myself with noticing the phenomena observed dissection, with one or two particulars which seem to demand brief observation. You will recollect that this man exhibited r several weeks before his death unequivocal signs of a large vity in the left lung, and that latterly the right lung also had ecome dull on percussion, and that the stethoscopic phenomena dicated the formation of a new cavity at its upper portion.

Here are the lungs; the left, you perceive, is larger than the ght, and exhibits a marked depression at its upper portion, here the phthisical cavity is situated. You perceive also that e pleura investing it is very much thickened, and very rough n its surface; this appearance was in consequence of its intimate nd universal adhesion to the corresponding pleura costalis, from hich it was separated with considerable difficulty. You pereive that the right lung is rather smaller than the left; the left eing rendered more extensively solid by disease, has become inapable of collapsing after death to the same extent. We shall ow make a section of the lung to show the extent of the cavity. ere is the cavity; you perceive that it is nearly large enough contain a small orange, and that its walls are lined with a firm emi-cartilaginous membrane. At the upper and internal part ere is a small opening which seems to be the commencement f a fistulous passage, a very common occurrence in cases of hthisis senilis; I shall introduce a probe and lay it open. Here the track of this fistulous opening, and you perceive it terinates in one of the large ramifications of the left bronchus. ou may perceive also that the section I have made displays asses of small granular tubercles in the upper and anterior ortion of the lung, quite different in size and appearance from e large tubercles seen in the child and adult.

I shall now make a section of the right lung. It is much ore natural in its feel and appearance than the left, but still all chronic cases of phthisis we seldom have the disease mited to a single lung. Here, you perceive, are a few patches f granular tubercles, looking as if they were infiltrated into the ubstance of the lung, and not surrounded as the large tubercles f the adult and child are by vascular condensed pulmonary tissue. Here, you see, I have cut into a small cavity; from its contents and appearance you can judge that it is of comparatively recent formation; it has no semi-cartilaginous lining, and is of very inconsiderable size. You perceive also that it communicates freely with a pretty large sized bronchial tube, and contains a quantity of muco-purulent secretion.

With respect to the state of the viscera of the abdomen, I may observe that, with the exception of some portions of the intestinal tube, which I am about to show you, they presented nothing remarkable. The liver and kidneys were found to be of the natural size, somewhat indurated and very friable, and the spleen exhibited several small tubercular spots on its surface. Here are the stomach and duodenum, which you perceive retain their normal appearance; and the same remark is to be made of the colon and rectum. In the cæcum, however, which you see here, and here also in the ileum, there are several ulcerated patches of an oval form, and corresponding to the situation of the glands of Peyer. In some places you perceive the ulcers have destroyed not only the mucous membrane, but also the muscular coat of the intestine, and have very nearly produced perforation.

A most important inference may be drawn from this fact. Here we have several ulcers destroying the mucous coat of the intestine, and eating their way through its muscular tissue, so that the only barrier left to prevent an effusion of the intestinal contents into the cavity of peritoneum, is a thin layer of serous membrane. Yet, during the whole time he remained in the hospital, his bowels were so obstinately costive, that we were obliged to give him purgative medicine every second or third day, to procure an evacuation. You will suppose, *a priori*, that a man, in whom ulcerations of the bowels existed, would suffer considerably from pain, griping, and tympanitis, and that he would labour under the diarrhœa so frequently observed in the advanced state of phthisis.

Our predecessors entertained a notion that the diarrhœa of phthisis is a species of internal sweating; they observed that when the patient ceased perspiring from the skin, he was generally attacked with a watery diarrhœa, and hence they termed the diarrhœa, *colliquative*. Afterwards it was found, on numerous examinations, that where this diarrhœa had existed, there was, in most cases, ulceration of the bowels ; hence pathologists began to believe that this ulceration had a great deal to do with the intestinal symptoms observed towards the termination of phthisis, referring to it the abdominal pain and tenderness, the unmanageable character of the diarrhœa, and the aggravation of the hectic symptoms.

Now, it strikes me that this mode of accounting for these symptoms was, perhaps, too hastily adopted. No doubt ulceration of the bowels may produce all the symptoms detailed; but, on the other hand, it may exist to a very remarkable extent, and yet produce no symptoms by which it could be recognized. Here was a patient who never had the slightest tendency to diarrhœa, who never complained of pain, griping, flatulence, or abdominal tenderness; on the contrary, his bowels were not merely slow, but even confirmedly costive, and he always felt more or less relief from the use of purgative medicine. None of us ever suspected that anything like ulceration existed; we gave him a full dose of castor oil every second day, which produced one rather scanty evacuation, and yet when we come to examine his intestines, we find numerous patches of ulceration.

This case is calculated to make a deep impression on every reflecting mind; in a practical point of view it is of great importance. If the scrofulous disease had in this case been entirely limited to the bowels, and had not touched the lung, the great probability is, that it would have been almost wholly latent; that the man would have taken no notice of it, would have thought himself well, and eaten, drank, and worked as usual: that the disease would have gone on stealthily committing its ravages, and that one of the first symptoms of danger would have been the occurrence of perforation, followed by universal and fatal peritonitis.

The question would then be as to the cause of death. The pathologist would open the body, and find at once that the cause of the whole mischief was ulceration of the intestines; but he would be mortified to think that the work of destruction had gone on silently and unobserved, and that it could not be recognized until a new disease appeared, under which the patient sank. I have read of more than one case in which a person killed by accident was found to have large ulcerated patches in the ileum, and yet had not been known during life to complain of any intestinal symptoms. In one case, a strong and apparently healthy Lascar, who had eaten heartily an hour before he was killed, and whose digestion was, according to his friends' account, unaffected by any morbid derangement, presented, on examination, a number of deep ulcers in the ileum, which would, in all probability, have ended in perforation and peritonitis in the course of a few days.

In the third and last case to which I shall refer, in illustration of the latent character which phthisis sometimes assumes, arachnitis was also present, and likewise without any indicative symptoms. A young policeman, apparently of strong constitution, and on active service up to the date of his present attack, was admitted on the tenth day of his illness into our fever wards. His surface was cold; his feet and hands blue; his pulse 70, exceedingly weak; he lay in a listless state; he sometimes answered questions slowly, but rationally; but at other times paid no attention to what was said to him. He had complained of pain in the forehead the first ten days of his illness, but though the question was frequently put to him afterwards, he always expressed himself perfectly free from any pain or uneasiness in that part. During the day he was quiet, but towards evening he generally became delirious and violent, and on those occasions it was found necessary to apply the tight vest. His head was always cool; he had no contraction of the pupils, no increased pulsations of temporals or carotids, no suffusion of eyes, and no sweating of face or forehead.

From the date of his admission until that of his death, which occurred sixteen days afterwards, he never exhibited the least febrile disturbance; his pulse fell down to 60, was weak but regular; *respiration always* perfectly natural, and he was never observed to cough. Though in the progress of his disease he got subsultus, jactitation, muttering, and complete insomnia, yet all this time the head was cool, and he presented no positive symptom of an active inflammatory process going on in the brain. Indeed the disease was so protracted, and the disturbance of the nervous system so similar to what frequently occurs in fever uncomplicated with inflammation, that I pronounced his disease to be nervous fever. Four days previously to death, purging had been present.

Post-mortem.—The dura mater was quite healthy, but the arachnoid was in several situations opaque and thickened. At the base of the brain, the nerves were all matted together by a thick yellow lymph, which extended from the optic commissure to the medulla oblongata, concealing from view all those parts which form the floor of the third ventricle, and also the origins of the third and sixth pair of nerves. The arachnoid covering this lymph was thickened and opaque, the pia mater was much injected, and the substance of the brain was more vascular than natural, but in other respects normal.

The chest was next examined, and our investigation in this cavity disclosed what we were not prepared to expect. Both lungs were extensively studded with tubercles, and were in every part occupied either by phthisical abscesses or emphysema. The entire of both upper lobes was converted into abscesses, varying in size from that of a hen's egg to that of a Spanish nut, and communicating freely with one another. These abscesses were not of recent formation, for in every instance their walls were hard, thick, and cartilaginous, and some of the larger were traversed by blood-vessels. Most of them were full of puriform matter; in some the contents were perfectly purulent, in others pus mixed with blood, resembling the prune-juice sputa of pneumonia. The heart was healthy; the ileum was healthy, but the cæcum was inflamed, and presented many ulcers of a long irregular shape, extending through every structure down to the peritoneal coat, which, on the outside, presented no unusual appearance opposite these ulcers. Their edges were elevated, hard, and well defined.

An important reason why tubercular deposition sometimes escapes our recognition during life is, that percussion does not always afford us a means of arriving at a true diagnosis in cases where solidification of the lung has taken place. It is generally believed, that in cases where the actual quantity of air in the lungs is morbidly increased or diminished, percussion furnishes us with means of information adapted to every variety of case, and capable of unlimited application. This, however, is not the fact. It is true that when percussion furnishes positive evidence of increased pulmonary solidity, we may be pretty sure that solidification exists; but such evidence is not furnished by percussion in every case of the kind indiscriminately, for it now and then happens that percussion elicits a very clear sound from the parietes of the chest, corresponding to considerable solidification of the lungs within. Of this I have now witnessed several instances. You will ask, how then are we to explain this apparent contradiction between the results afforded by percussion? This is a question of much importance, and I hope the solution which I am about to offer will be found adequate and satisfactory.

An old man named Foy died lately at Sir Patrick Dun's Hospital of hepatization of the inferior lobe of the right lung, with numerous tubercular depositions in the upper lobe of both lungs. During his illness I pointed out the existence of extensive hepatization of the lower lobe of the right lung, in which perfect and decided dulness marked out accurately the space occupied internally by the solidified pulmonary tissue. But anteriorly, and above, the parietes of the chest returned a clear sound on percussion, nor could a vestige of dulness be anywhere detected. Yet the whole of the upper lobes of this patient's lungs was occupied to such an extent by crude tubercles, that no portion of the upper lobes could be selected, equal to half the size of a fist, which would not sink in water. This was owing to tubercular matter, which occupied the pulmonary tissue in detached infiltrated masses, or in single crude tubercles.

How, then, did it happen that such extensive solidification of the upper lobes existed without any corresponding dulness on percussion? A careful examination of the pathological condition of these lobes satisfactorily explained the anomaly. On accurate inspection, we found that although the solidified masses of the pulmonary tissue were extremely numerous, and predominated over the parts which still retained their natural vascular texture, so that an extensive portion of the upper lobes seemed to be quite solid, yet the solidified portions were insulated and divided from each other, throughout the interior of the lobe, by intervening laminæ of healthy pulmonary tissue, and on their surface were, for the most part, covered by a stratum of healthy vesicular lung, from a quarter to half an inch in thickness. Indeed, although the solidified masses (to use a geological expression) sometimes cropped up, and came to the surface, yet this was a comparatively rare occurrence; and by far the greater portion of that surface was composed of a thin stratum of pervious vesicular tissue. To this was owing the clear sound elicited by percussion.

You will recollect, therefore, that in certain (I will admit e) cases of tubercular deposition in the lungs, the tubercular velopment may have proceeded to the extent of rendering the ater portion of the upper lobes impervious to the air, and y have solidified those bodies considerably, and yet the idified portions may be so divided from each other by laminæ healthy lung, and may be so covered by a stratum of vesicular sue, that the general result of percussion is to elicit a clear und over the whole of the parietes of the chest corresponding the affected lobes.

I shall now conclude with some observations on laryngeal thisis, referring first to the case of Francis Thorp, which is portant both in itself and from the circumstance of such cases ing frequently met with. This lad, who was much exposed to e weather, being an outside servant, was attacked about six onths ago with cold, followed by hoarseness and sore throat, ith cough, then slight, but at present rather troublesome. A rtain degree of rawness about the fauces was observed soon ter the attack, and latterly the sub-maxillary glands have come slightly enlarged. On looking into the throat, the lum and fauces appear redder than natural, the amygdalæ are vollen, and the mucous membrane covering the back and sides the pharynx is dry, and covered with irregular superficial coriations. The hoarseness still continues, and he can only eak in whispers. His general health, however, does not seem any degree impaired; he has no fever, his appetite is good, d his sleep natural.

This case, however, is one which demands particular attention. boy is attacked with cold; he gets slight local inflammation the fauces and larynx: this produces cough and hoarseness, hich go on for months rather increasing than diminishing, and s symptoms finally assume a chronic and intractable character. ill he does not fall away in flesh, has no symptom of hectic, and, examining his chest, you cannot find any evidence of the istence of tubercles. In making the prognosis in such a case, u should always act with great caution.

Though an examination of the chest should detect no sign of bercles, and a review of the state of the constitution should tisfy you that there was no fever, night sweats, or a wasting flesh, the obstinacy and persistence of the inflammatory condition of the larynx and fauces would seem to show tha affection, though not decidedly of the scrofulous characte still very analogous to it, and might end in phthisis. should not be so sanguine as to anticipate a certain because the cough and laryngeal symptoms are unaccomp by fever, or by stethoscopic phenomena, indicating the app of phthisis. The disease, by fixing itself in the larynx keeping up a constant irritation in the neighbourhood (lungs, would probably, after some time (if exacerbated by colds, and confirmed by neglect), give rise to tube development.

We have then a form of chronic laryngeal inflamm which has been described under the name phthisis lary Of this disease there are two varieties. In one case the h ness and sore throat follow the development of tubercles i lung; in the other, they precede it. Consumptive person quently get, shortly after the occurrence of scrofulous infla tion of the lungs, sore throat, hoarseness, and laryngeal c But this is different from the hoarseness and cough v precede phthisis. In the former the laryngeal symptom secondary, and form only a part of the general disease; i latter they constitute the first link in the chain of morbid a The former take place only in a constitution decidedly scrofu the latter occur most commonly in constitutions which been impaired by various debilitating causes, and thereby ren analogous to, or identical with, the scrofulous.

One disease, however, explains the other; for it is clea if a certain state of the constitution is capable of occasi scrofulous inflammation of the lungs and tubercular de ment in the pulmonary tissue, in the first instance, and lary disease in the second, it is clear, I say, that the order of su sion may be very easily inverted, and that in such a constitu the accidental circumstance of a cold falling on the larynx determine the appearance of disease in that part long befo lungs become engaged. Hence, whenever you are called treat a case of chronic laryngitis, where the disease has l for any length of time, and where the patient's system has impaired by any debilitating cause, or where you have any r to suspect that he is of a strumous diathesis, your prog should be always guarded.

You should not, however, give up the case at once; particularly if an examination of the chest assures you that there is no scrofulous deposition going on in the lung. In the first place, endeavour to remove the inflammation of the throat, if possible; by doing this you will accomplish a vast deal; and in the next, you shall direct all your efforts towards improving the state of the constitution; for in this way you make the greatest progress in checking the tendency of the individual to scrofula.

If there is much tenderness of the larynx on pressure, as you can easily ascertain by placing your finger and thumb on each side of the thyroid cartilage, pressing the larynx backwards, and moving it from side to side, you should commence with the local detraction of blood. A small number of leeches should be applied to the throat every second or third night, and this should be continued for a week or fortnight. If there be no tenderness of any amount, and the patient can bear pressure freely, there is no necessity for applying leeches. Your means must then be confined to those remedies which act immediately on the diseased mucous surface; and for this purpose, one of the best applications is a solution of nitrate of silver, ten grains to the ounce, or a solution of the sulphate of copper in the same proportions. The best mode of applying it is to take a probang, or a small piece of sponge fastened to the end of a quill, dip it in the solution, and having slightly squeezed it, to prevent the liquid from dropping, touch the excoriated and red parts of the fauces as far as you can conveniently go, rather by pressing the sponge gently against the inflamed mucous membrane than by rubbing. It will be essentially necessary to touch every portion of the diseased surface of the pharynx; for if any part be omitted, it will have the effect of keeping up the disease.

You perceive the object here is to change the action of the mucous membrane. By acting powerfully in this way on the mucous membrane covering the pharynx, fauces, and entrance of the larynx, you will often succeed in bringing on a healthy action, which spreads to the parts of the vicinity. Of this we have an illustration, afforded by the results of treatment in chronic diseases of the skin, where local applications to a particular part not only cure that part, but also extend their influence to a considerable distance on every side. It is the same with respect to irritation or inflammation of the lower part of the digestive tube; the use of astringent injections, which can only affect the lower part of the rectum, is often found of essential service in relieving dysenteric affections of the colon.

In addition to the use of the nitrate of silver, we have employed a remedy in this boy's case, which has been found beneficial in several instances where no sign of pulmonary irritation is present —I allude to the use of iodine inhalations. This was also intended to make a still further change in the condition of the diseased mucous membrane. It is made by putting from five to ten drops of the tincture of iodine, with half a drachm of tincture of conium, and four ounces of hot water into an inhaler, and making the patient draw the vapour into his throat for about ten minutes every night and morning.

This form of inhalation proved extremely serviceable in the case of a gentleman who has attended my lectures this winter. About the commencement of November, while in a delicate state of health, he was attacked with cold, and got sore throat, followed by slight huskiness of voice, and hard, incessant laryngeal cough. These symptoms continued during December and the greater part of January, and were not completely removed until the beginning of February. He had considerable rawness of the back and sides of the fauces and larynx: we observed that the mucous membrane of those parts had a strong tendency to become excoriated; for whenever an exacerbation of his symptoms occurred, and that his cough in the morning was harder than usual, small portions of the detached pellicles of lymph, exuded by the mucous membrane, came away at each fit of coughing, and his sputa were tinged with blood. There was another symptom in this case, which you will very frequently meet with in similar instances, namely, a remarkable feeling of chilliness in the integuments of the fore part of the neck and external fauces. This he was in the habit of remarking, and could always foretell the occurrence of an exacerbation of his laryngeal symptoms, by the increased feeling of cold in the cutaneous surface over the diseased parts.

In this case a great deal of good was effected by the inhalation of iodine with conium. The mode in which this gentleman employed it was by dissolving from six to nine grains of the extract of conium in water, and then adding the tincture of iodine; but the expressed juice of hemlock—the "*succus conii*," answers much better for this purpose; from two to three tea-spoonfuls of it may be used. Instead of the common inhaler, which contains but a small quantity of fluid, and in which the inhalation becomes cold in a very short time, he employed for the purpose a high, old-fashioned tea-pot, which contained a large quantity of fluid, and could be used for a much longer period. Under the use of this, with counter-irritation, and the internal use of iodine with sarsaparilla, the laryngitis disappeared. It returned, however, about a month afterwards on fresh exposure; but was speedily removed by the use of the nitrate of silver solution.

Another thing which we have prescribed for this boy, and which proves an excellent adjuvant in the treatment of such cases, is counter-irritation by croton oil frictions. To an ounce of compound camphor liniment we add twenty or thirty drops of croton oil; and of this lotion about one or two drachms are to be rubbed over the part night and morning, until the eruption appears. Two rubbings are generally sufficient to produce a copious eruption of papulæ, about the size of a pin's head, and having exactly the appearance of a disease at present very rare —the eczema mercuriale.

We have not, however, been able to effect any remarkable improvement in this boy's symptoms by the means to which I have just now alluded; and the question is, what other remedies have we left from which we could hope to derive any advantage? The boy has no fever or emaciation; his appetite is good, his sleep regular, and the stethoscope informs us that there are no symptoms of tubercular development: we are, therefore, I think, authorized in attempting to arrest the disease by the only means of which we have a choice under such circumstances. It is my intention to attempt its removal by mercury, and I have therefore ordered him to take, three times a day, half a grain of calomel, three grains of blue pill, with a grain of the extract of conium; and instead of iodine we have directed him to inhale the vapour of hydrargyrum cum cretâ twice or three times daily. If, however, we find that this does not produce speedy improvement of his symptoms, we shall stop it immediately, as the use of mercury in such cases is generally a perilous experiment. I shall also take care to pay attention to the general state of his health, as this is a matter of great importance in cases of chronic disease. I had almost forgotten to observe, that in such cases the use of the decoction of sarsaparilla with nitric acid has been found extremely beneficial.

There is one point in the treatment of chronic laryngitis and laryngeal phthisis which you should never forget—and that is, to make the patients refrain as much as possible from speaking. Unless they do this, you will find it very difficult to effect a cure. A person with an inflamed larynx, who exercises his voice as usual, acts as foolishly as a man who reads with inflamed eyes, or walks with a sprained ankle. The only thing I have to add with respect to the treatment of this disease is, that the patient should be kept as much as possible in an equal temperature, and hence it will be necessary in many instances to confine him to the house, or at least to prevent him from exposing himself to a cold and damp atmosphere. When he recovers, he should use cold gargles and cold lotions to the throat, in order to render the parts less susceptible of cold.

In conclusion, I may remark, with reference to a sign looked upon as highly characteristic of the phthisical diathesis, that within the last ten years I have seen, in private practice, three examples of hypertrophy of the finger tops, and corresponding hypertrophy of the nails, two occurring in delicate, and one in a phthisical habit. In all these patients the remaining parts of the fingers were emaciated, while the tips of the fingers were much and abruptly enlarged, especially in the transverse diameter, the nails being also of greater size, considerably longer, broader, stronger, and more curved than natural; in all these there was evident increase in the capillary circulation, and the tips of the fingers were red, tender, and painful, and often bathed in sweat; a minor degree of this affection, characterized however only by incurvated nails, while the tips of the fingers are much less emaciated than other parts of the hand, feel hotter to the patient, and sweat more, is frequent in phthisis.

LECTURE XLVI.

HEMOPTYSIS.

We shall devote this lecture, gentlemen, to the consideration of hemoptysis. Let us first consider it with reference to the different parts of the vascular tissue of the lungs, which are engaged in its production, and afterwards speak more accurately of the symptoms attendant on each. It may be well to commence with the source of hemoptysis, because there are some misconceptions respecting it, and I do not think that it has been clearly laid down in books written on this subject; I shall therefore devote more time to the consideration of some points of the morbid anatomy of this disease than I usually do in a clinical lecture. Other circumstances which you will find sufficiently described in written treatises I shall pass over briefly.

In order to comprehend fully the peculiarities of hemoptysis, it is necessary that you should be intimately acquainted with the circulation of the lungs. Here you have not only the simple circulation, as in other parts, but,—as in the liver, we have the vena porta for the formation of bile, and the hepatic artery for nutrition,—so in the lungs we have the pulmonary arteries carrying blood which is to be aërated, while the bronchial arteries carry blood for the support and reparation of the pulmonary substance.

You are aware, gentlemen, that it has been shown that the lung is but a large gland, whose ducts are the bronchial tubes, and whose secreting surface is that of the air-cells. There is this difference in the sources from which blood is furnished to the lungs; the bronchial artery is small, and its blood red; the pulmonary artery immensely large, and carrying dark blood, which is to be aërated; the bronchial arteries follow the course of the bronchial tubes, interlace with and ramify over them, enter them, and are distributed in great profusion to their mucous lining. On the inflammatory action of these arteries the redness and injection of the mucous membrane, observed in cases of bronchitis, depends. The bronchial arteries also send branches to the areolar membrane connecting the air-cells, and to the surface of the lungs, but it is for the mucous membrane lining the bronchial tubes the greater part of their blood is destined.*

You know that if we examine the structure of the lungs, besides their vascular tissue, we observe they consist chiefly of ramifications of the bronchial tubes leading to air-cells. These cells may be represented as so many minute vesicles, each communicating by a minute aperture with an extremely small ramification derived from the bronchi. This fact has been shown and described by Reisseisen. The vesicles which are placed at the extremities of these minute branches, and the branches themselves, present certain differences, the vesicles presenting a greater degree of tenuity, and a strong resemblance to serous membrane. These distinctions between the structure of the air-cells and that of the bronchial tubes cannot be easily recognized in the very minute tubes of the bronchial ramifications, but become more evident as we ascend towards the larger bronchi. The use of the air vesicles is to aërate the blood in the lungs, and it is on the parietes of these vesicles or cells the ultimate branches of the pulmonary arteries are distributed.

When we come to speak of discharge of blood from the lungs, and to consider the phenomena it presents, we find that it may take place from the minute extremities of the bronchial or of the pulmonary vessels. The seats of the ultimate ramifications, as I have before mentioned, are completely distinct, and it is important to recollect that they are so. Inject the bronchial arteries with as much care as you possibly can, and I say you cannot by doing so inject the vessels which ramify on the air-cells, nor can you, on the other hand, inject the vessels which are distributed to the mucous membrane of the bronchial tubes from the pulmonary arteries. Of this I am perfectly sure, for I have tried the experiment myself unsuccessfully, and have examined with the greatest care the beautiful preparations in the museum of the late Dr. Townsend, and neither he nor Dr. Houston could show me one instance of the bronchial mucous membrane having been injected from the pulmonary artery. Even the finest injections used by Dr. Houston at my request, in the lungs of dogs, failed to effect what would indeed be easy of accomplishment, if engorgement of the system of the pulmonary artery were capable of producing bronchial hemorrhage.

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* Reisseisen remarks, that by far the greater portion of this blood is returned, not by the bronchial veins to the right side of the heart, but by the pulmonary veins to the left side. Is this peculiarity owing to this blood being dissimilar to other venous blood, in consequence of being aërated in the bronchial tubes? or is it because it may be mixed with impunity with the great mass of aërated blood returning from the lung?

There is, to be sure, a system of capillary vessels in the lung, through the medium of which an indirect communication is established between the bronchial and pulmonary arteries and the pulmonary veins. Dr. Law, of this city, in the article "Hemoptysis," in the *Cyclopædia of Practical Medicine,* has handled the subject of the relative distribution of the vessels in the lungs with his usual ability. I cannot, however, see that Reisseisen, whom he follows, justifies him in considering hemorrhage from the bronchial tubes as a consequence of hemorrhagic engorgement of the system of the pulmonary artery. "We readily account for its frequency," says Dr. Law, "by the facility with which an injection is found to pass from the pulmonary into the bronchial artery." Reisseisen, it is true, points out that the bronchial and pulmonary arteries anastomose with the same system of capillaries on the surface copiously, and more sparingly in the areolar texture of the lung; but his description likewise proves, that the bronchial mucous membrane is exclusively supplied with red blood by the bronchial arteries.

It is indeed true, that we can force injection from the pulmonary artery into the bronchial tubes, but even in such cases the bronchial mucous surface is uninjected, and the injection finds its way therefrom into these tubes by other channels than the bronchial artery or its ramifications, which would indeed be a retrograde course. I am therefore of opinion, from the reasons above stated, that when hemoptysis, from the engorgement of the system of the pulmonary artery, takes place, it is in consequence of the direct effusion of blood from the branches of the pulmonary artery, which ramify on the air-cells, and that the blood expectorated on such occasions has nothing to do with the bronchial mucous membrane, or bronchial arteries.

When we recollect the peculiar texture of the lungs, and the quantity of blood which is sent through them at each stroke of the heart; when we consider the excessive tenuity and delicate structure of the air-cells, which, when the lung is inflated by inspiration (and that is the very moment when the most blood rushes through it), imparts to the touch the feeling of an elastic but almost gauze-like and cellular substance, we are surprised to find that cases of spitting of blood are not much more frequent. The lung, however, is an organ so important to life, that if ever there was much danger of hemorrhage from its tissue, it would be a greater error in our structure than nature was likely to commit. Cases of this kind are comparatively rare, and we do not meet with them every day in our hospitals. Compare with the patients afflicted with dangerous and copious hemoptysis, the number of cases of bleeding from the nose, hematemesis, discharges of blood from the bowels, and hemorrhage in general, and you will find that the lungs are not more liable than other parts to sanguineous effusions.

When speaking of the vascular arrangements of the lungs, we mentioned that the bronchial mucous surface is supplied with blood from the bronchial arteries, and the air-cells from the pulmonary. Hence we can divide these discharges into two kinds, those which come from the pulmonary, and those which are derived from the bronchial arteries; and these will be found to be distinct, not only in their pathology, but also in their characters and the symptoms by which they are attended.

We shall go through this minutely. Let us suppose that the pulmonary artery is disposed to bleed, what will take place? Its ultimate ramifications, which are distributed over the air-cells, get an hemorrhagic tendency, and blood escapes from them in two different directions, into the air-cells, and into the areolar tissue which connects them. That portion of blood which gets into the air-cells will also get into the bronchial tubes, and may be spit up. That portion which gets into the inter-vesicular areolar tissue has no such exit; there it must remain and become coagulated and solidified. Now, as either of these effects may happen, we may have spitting of blood, or else effusion into the areolar texture, without hemoptysis.

It is to the union of these two diseases the term *pulmonary apoplexy* has been applied, in which we have blood effused into the cavity of the air-cells, and outside their cavity into the areolar tissue. What is the result of sanguineous effusion from the pulmonary branches? In the first place, the blood is black, as you can perceive when it is spit up. It is also clear, that if this blood be detained for some time in the air-cells and bronchial tubes, it will become coagulated and be spit up in clots. Many of the worst cases of spitting of blood are attended with this symptom; and it is a mistake to suppose, as you see it mentioned in books, that blood expectorated from the lungs should be florid and frothy.

You are told gravely, that you can distinguish blood discharged from the stomach from that which is discharged from the lungs, by the difference of its colour, consistence, and the presence or absence of air bubbles. No, gentlemen, you cannot. If you see blood spit up which is dark and coagulated, and from stethoscopic examination have reason to think that it comes from the lungs, you will be convinced that the effusion is from the pulmonary artery. I do not mean to say that when blood comes from the pulmonary artery it is always black and clotted; but I assert that it is so in a great majority of cases; and in many cases of pneumonia we find the sputa partake more of the venous than the arterial character, a circumstance which indicates its formidable source. It is obvious that the blood spit up in those cases may also have a florid tinge, where it has been imperfectly aërated by the imperfect action of air bubbling through it before it is expectorated. Not only is it possible, as I have stated, that black blood may be changed in colour after effusion into the bronchial tubes, by the rapid bubbling of air through it, but it is also extremely probable, that if arterial blood ooze out very slowly from the bronchial surfaces, and remain for any considerable length of time in the air-passages mixed with their mucous secretion, it may, before it is expectorated, change its hue and become dark, as happens where red blood is long exposed to the action of the secretions of the alimentary canal, for example, in melæna. The correctness of these views has been confirmed by the experiments of physiologists, as the following extracts which I shall read for you show:—

"When arterial blood is kept at rest in a living vessel, it gradually acquires the properties of venous blood, as may be seen on slackening a tourniquet after an amputation when the first blood that issues from the divided arteries is of a dark colour. If arterial blood is placed *in vacuo*, or is exposed to nitrogen, hydrogen, or carbonic acid, it loses its florid hue. Extravasated arterial blood remains florid for several minutes; after an interval it is found to have coagulated, and to have acquired a dark colour."—*Mayo's Physiology,* Fourth Edition, p. 21. Again:—"That the changes which venous blood undergoes in the lungs are to be explained upon principles of a purely chemical and physical nature, is evident from the fact, that the same changes will take place when it is exposed to the air out of the body, even through the medium of a thick membrane, such as a bladder. . . . . If arterial blood be exposed out of the body to carbonic acid, it will acquire the dark hue of venous blood; and venous blood exposed to it becomes still darker."—*Carpenter's Physiology,* Third Edition, p. 598.

There are some hemorrhages also, from the bronchial artery, which are very copious; but, generally speaking, where there is much cough, constriction of the chest, and fever, it is the bronchial mucous surface which is affected; and the spitting of blood which, in such cases, comes from the bronchial arteries is but scanty, and is seldom dangerous. The blood will be found to be effused from small spots, as in epistaxis, and the quantity is generally small. You will, however, sometimes find an instance of a person spitting up very copiously blood of an arterial colour; for it must be borne in mind that a very small surface of mucous membrane may often bleed most copiously, as is seen in some cases of epistaxis, when the blood issues from an insulated and small spot. Such cases of copious bronchial hemorrhage occur occasionally, are unconnected with bronchitis, and depend on some peculiar hemorrhagic tendency.

We have thus drawn a distinction between these two kinds of hemorrhage; let us trace it further. Suppose you have a case where blood is effused into the areolar tissue of the lungs; the blood so effused is immediately submitted to a peculiar action of the animal economy. It is first by coagulation separated into two portions, serum and crassamentum. The serum is rapidly absorbed, and as soon as this is accomplished, the crassamentum becomes solidified, and remains there with its colouring matter, as you have it represented in this plate of Cruveilhier's, where you perceive, as it were, balls in the substance of the lung, of a solid consistence and red colour, formed by the colouring matter and clot.

The first effect of effusion of blood into the areolar tissue is a tendency to solidification, one chief consequence of this disease, which has not been noticed by those who have written on pulmonary apoplexy. Nature is anxious to stop this effusion of blood, as, in this instance, it threatens that life which she watches over at all times with so much care. Now, what is the consequence of this solidification? First, all the air-cells of the part are closed by the pressure of the coagulum, that portion of the lung which has been bleeding becomes impervious to the air, and this circumstance alone is sufficient to arrest the hemorrhage. And why is this the case? Because the blood which flows through the pulmonary arteries cannot pass into the veins unless in its passage it be aërated. It is its aëration which, at the first moment when the infant respires, causes the blood to rush through the pulmonary vessels in ten times the quantity it did before birth.

If you asphyxiate an animal, or by any means put a stop to the process of aëration, you will find that in proportion as the air in the lungs becomes deficient or impure, the blood ceases to pass from the right to the left cavities of the heart, because it cannot pursue its natural course unless it be properly aërated. Hence, when a part of the lung becomes impervious to the air, the passage of the blood, so far as that is concerned, will cease, and consequently the tendency to hemorrhagic effusion.*

You see, then, in this case, two causes in operation to prevent effusion of blood—mechanical pressure, and such a state of that portion of the lung which had been bleeding, that less blood goes to it in consequence of its no longer performing its share of the respiratory function.

A great deal has been written about the ulterior effects of blood thus effused. It is evident that when the effusion takes place into the air-cells, it may be spit up and produce no further harm; and if the patient recovers without any effusion into the inter-vesicular tissue, there is no trace of the disease. The danger, therefore, arises from the quantity of blood poured into the areolar texture, which, by obliterating the air-cells (if the extent be considerable), may destroy the functions of the lungs, and in this way produce death, as you may have observed in the case of hemoptysis above stairs, where the cessation of spitting of blood was a bad symptom. The disease was going on for some time, and not confined to any particular part, but extending over the whole of one of the lungs, and you can now conceive the reason of this man's death. It was because by effusion and solidification to a great extent he was deprived of the use of his lung.

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* By the *passage of the blood*, is here only meant the rapid and unimpeded circulation from the pulmonary artery into the pulmonary veins, for it is evident that a part of the lung, impervious to the air, may be the seat of sanguineous engorgement, as happens in the posterior parts of the lungs of those who die after a long agony, or in the various stages of pneumonic engorgement and hepatization.

Yet you will find instances where a person has more than half the lung filled with a clot of this kind, and still survives; and you may observe parallel cases in the prolonged life of some patients who labour under organic disease of the lungs. This is generally seen where the quantity of blood circulating in the whole system is small; for when the power of aëration is diminished, it is necessary that the quantity of blood which passes through the lungs should be reduced below its average amount, or its course will be arrested.

Where then we have extensive solidification of the lung, and obliteration of the air-cells from such effusions, what is the consequence? Sometimes we have sudden death from dyspnœa, sometimes the fatal termination is of a slow character. It is stated by some authors, that blood of this kind acts as a foreign body—as an irritant, and excites inflammatory action. Others say that the effused blood not only produces inflammation, but also gangrene and softening of the affected portion of the lung. With respect to this, I may be permitted to express very strong doubts.

We do not see effusions of blood in other parts of the body attended with such consequences. I would ask any one who has seen a case of ecchymosis under the conjunctiva, where that membrane is raised high over the eyeball by an immense clot of blood, whether this clot, though in such close juxtaposition with an extremely sensitive organ, ever produces inflammation? How often have we seen blood effused into areolar tissue from wounds or contusions, remain quietly in its new situation, and be absorbed, without producing any inflammation? But, with respect to this question, the admission of all pathologists, that many such solid portions may exist in the lungs together, without the least appearance of inflammation in the pulmonary substance immediately around them, seems quite conclusive. Thus, in Cruveilhier's plate now before you, the section of the lung showed that the cells were uninflamed quite to the very edge of the various solidified portions, although they had existed for many days before death. Again: do we not know, that even in the brain itself blood may be effused and sudden paralysis produced, and that the patient may quickly recover, and a clot remain in the cerebral substance without producing inflammation. It is true that blood effused into the lungs is, in many cases, attended with pneumonia, and that extravasations in the brain are frequently accompanied by softening. This I do not deny; but I think that both are simultaneous effects of the same cause, and that in the one case pneumonia and sanguineous effusion, and in the other extravasation and ramollissement, are only different parts of the same process.

If a person recovers after the discharge of a large quantity of blood into the lungs, what is the consequence? If the constitution be sound, and the hemorrhagic tendency does not recur, it is probable that this portion may be submitted to the action of absorption, and ultimately rendered healthy. This I believe may happen, for the phenomena of absorbed hepatization in pneumonia gives it probability, and though I myself have not seen it verified, it is described as having been observed by others. I have, however, ascertained satisfactorily, that this portion of the lung may remain solid for a considerable length of time, without producing any particular symptoms. Two cases of this condition of the lung, remaining in one instance for a year and a half, and in another for three years, without subjecting the patients to any inconvenience whatever, have come to my knowledge, and, after death—which was caused in each by a different disease—I have been able to detect these solidifications by dissection.

It has been stated that persons who have portions of the lungs solidified are liable to phthisis. Where scrofula exists, tubercles may be precipitated into suppuration from this cause; but where the constitution is not scrofulous, the consumption which follows solidification of the lung is certainly not tubercular. I remember having attended, some time ago, a young man who had an attack of pulmonary apoplexy, and who afterwards got all the symptoms of phthisis except diarrhœa; I watched this case through all its stages, month after month. On examining the lu death, I could not detect a single tubercle; the matte tensively diffused through the areolar tissue, constitu disease to which the name of suppurating pneumonia given.

In the case of a young gentleman residing in Gardin who was attended by the late Mr. Colles, the sympto now mentioned were present, and it was generally tho he was dying of tubercular consumption. I was called him, and, on inquiring into the history of the case, I my opinion, that it was not tubercular consumption, b sive suppurating pneumonia, an opinion which was b by the necroscopic phenomena. You see, therefore, ge that a man may live for a considerable time with a p his lung solidified in consequence of this disease, or may get pneumonia, which may go on to interstitial tion, and present all the symptoms of tubercular cons or, if his constitution be scrofulous, he may get true t phthisis.

It is obvious, that in a person whom this disease wou obnoxious to pneumonic inflammation, if scrofula exists have the tubercular instead of the pneumonic action de for in scrofulous habits you will find that every cau produces irritation, or a tendency of blood to the chest, also a tendency to consumption. Dr. Stokes and I some time since, a gentleman who had pleuritic effusi right side of the chest, with engorgement of the lu dyspnœa. During the course of the disease he got tube where, do you think? Not on the side where the effusion existed, but in the upper part of the left lun should not be surprised at this; it was a consequen disturbance of the respiratory functions, and you may b that everything which deranges the pulmonary circu scrofulous persons, has a strong tendency to the develo tubercles.

There is a question in Laennec's work, in which it is a spitting of blood be considered as the cause of consump this I answer, that I have seen more than one case of p apoplexy in which the patient died of the first attack, an a single tubercle could be found in the lungs. It may produce a tendency to consumption, but is not a necessary cause of it. The same may be said of bronchial hemoptysis. Any one who has witnessed the dissections of the lungs of tuberculated patients must have frequently observed that tubercles are accompanied by an inflamed state of the bronchial mucous membrane. It is notorious also, that this state of the mucous lining, with the hard dry cough which it occasions, is one of the first symptoms of tubercles in the lung; and we therefore find, in many instances, that bronchial hemoptysis is a consequence and not a cause of tubercle.

Having hitherto dwelt chiefly on the general pathology of hemoptysis, I shall make some additional observations on the causes of this disease, and then proceed to the treatment, without entering into any accurate description of the particular symptoms, which you will find sufficiently detailed in most works on practical medicine.

You recollect, I differed from Dr. Law, with respect to the source from which the blood is derived in bronchial hemorrhage. Dr. Law is of my opinion, that anything which produces engorgement of the system of pulmonary artery occasions hemorrhage from the bronchial tubes; but this, for the reasons before stated to you, is impossible. I have also endeavoured to explain to you the manner in which pulmonary apoplexy may be followed by extensive disease of the lung, interstitial suppuration, and death; or, on the other hand, how a coagulum may be formed in the substance of the lung, and the person affected remain in a state of perfect health. I have proved, from dissection, that after the lung has been solidified in consequence of pulmonary engorgement, it may remain in that condition for years, or if a scrofulous diathesis exist, such an occurrence may be followed by tubercular consumption.

I have mentioned that kind of consumption supervening on effusion into the areolar tissue of the lung, where there is extensive interstitial suppuration, and not a single tubercle can be discovered. You will also recollect my statement that I could adduce instances in which pulmonary effusion took place, and the clot remained in the areolar substance without producing any irritation, and that on dissecting such lungs I found those organs perfectly sound up to the limits of the clot, and this in cases where the effusion had existed for several months.* Now if this remained in the substance of the lung as a harmless body for so long a space of time, I cannot conceive how a similar effusion could in any one case become a stimulant. I differ also from those who think that the effused blood may become corrupted and a cause of gangrene.

We shall now proceed to the consideration of some of those constitutional tendencies, which render persons liable to spitting of blood. It has been frequently remarked, that bleeding from the nose, during the periods of infancy and adolescence, is a symptom of frequent recurrence in those who are obnoxious to this disease, and in such persons without any apparent cause, and unaccompanied by any proper fever; the attack comes on with an hemorrhagic excitement of the circulation, sense of constriction in the chest, anxiety, dyspnœa, cough, and expectoration of blood of an arterial colour and frothy appearance. As soon as the expectoration, which is sometimes copious, sometimes scanty, takes place, the patient gets relief. There is not much preceding or following cough.

Such are the characteristics of this hemorrhage, which, notwithstanding Louis' statement, does not prove the existence of tubercles, or engorgement of the system of the pulmonary artery, and has no more reference than epistaxis to disease of the lungs. I knew seven gentlemen of the same family, most of whom were in the army, and residing in different climates, who were all subject to sudden expectorations of blood, without any particular antecedent or subsequent cough, or other symptoms of chest disease. Now I need not tell you, that as long as the hemorrhage preserves this character, and confines itself to the bronchial mucous membrane, there is very little mischief done. Persons thus affected will have repeated attacks of this kind, and though their lives are not the best, may attain a good old age. It is only when the extreme branches of the pulmonary artery take on the hemorrhagic action that danger is to be apprehended; and so it was with one of the gentlemen just mentioned. He had, during a period of twenty years, many sudden and often violent attacks of hemoptysis, which

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* It is not meant, that the effused blood occupies the texture of the lung without becoming organized. This is certainly not the case; all I mean to assert is, that the portion of the lung, originally rendered solid by the clot, remains solid, in some cases, for a great length of time, constituting an insulated mass impervious to the air itself, but not a source of irritation to the surrounding parts.

'er lasted more than a few days, and always subsided hout leaving a trace behind. So long as the hemorrhage s bronchial, it was comparatively free from danger: at t its seat was changed; it occupied the air-cells and intersicular areolar tissue of the lungs, and he died of pulmonary oplexy.

When the latter takes place, you must be on your guard, for have seen cases of melæna, where the customary discharge of lood from the intestines was considerable, and instances of iles where the bleeding from the rectum was great, from being uddenly arrested, produce pulmonary apoplexy and death. In uch patients, nature attempts to establish a vicarious discharge r that which has been suppressed. This is a frequent occurence in females, particularly those of a robust habit, in whom e general vascular action is not diminished at the catamenial eriod. In consequence of the suppression of the menstrual ux, blood is discharged from various parts of the body, but rticularly from those tissues which bear the closest analogy to at from which it is naturally derived.

Hence we have one kind of bronchial hemorrhage arising m suppressed menstruation, and which is not usually either ceded or followed by cough or other pulmonary symptoms. w, this discharge in females is not dangerous; it goes away it appeared, without any bad effects; and the same may be l of hemorrhage from other parts resulting from the absence the catamenia. Such, you will recollect, was the case of a man in the chronic ward, who had regular attacks of hemaesis at the periods in which the menses should naturally ear. Nothing is more common than to find this vicarious tric hemorrhage in women, and yet how rarely do we see it ceded or followed by organic disease, or producing the least manent lesion, or even dyspepsia. Such hemorrhage may generally said to be devoid of danger. As I mentioned ore, the translation is commonly from the mucous membrane the uterus to a similar surface of the nose, lungs, stomach, bowels. It seldom or never appears in a parenchymatous ue; and hence, in the lungs, rarely terminates in pulmonary plexy.

There is this freedom from danger, however, only in those es where no disease of the lungs, or tendency to pulmonary engorgement, previously existed. Thus, in the case of Eliza Herns, in whom, at the usual period of her menstrual evacuation, a vicarious epistaxis and hemoptysis occurred, the source of hemorrhage was not confined to the bronchial tubes, but extended to the air-cells. The blood she expectorated was, at first, of a florid arterial colour, and was copious; it afterwards became dark-coloured, and less abundant; and its source, as was evident from the stethoscopic phenomena, was derived from the ultimate ramifications of the bronchial tubes and the air-cells. *She had been subject to cough and expectoration of mucus for a year previously.*

With respect to the hemoptysis which attends pulmonary apoplexy, I shall only remark (as its symptoms are well known), that here you have the cough, dyspnœa, and other symptoms, following the hemoptysis, and very frequently pneumonia, and even gangrene. I have stated before, that I considered the two latter occurrences as resulting from the same cause which produced the pulmonary engorgement, and not as a consequence.

I will pass over this subject at present, and proceed to give you a few general hints on the hemoptysis which accompanies tubercular consumption. You remember I remarked that it is a disputed point whether this spitting of blood be the cause or consequence of phthisis. When we come to consider this subject dispassionately, and leave out theories, we find that, on examining phthisical hemorrhage, we invariably perceive that the discharge is bronchial, and that it presents the usual characters of arterial blood. It is because the irritation is bronchial you have so many bronchial rales in phthisis; and hence, if you find bronchitis at the top of both lungs, and none at the bottom of either, and this condition is permanent, your suspicions are naturally awakened, and you are led to the detection of tubercles: a bronchitic rale confined to the upper lobe of one or both lungs, resisting treatment, and accompanied or followed by dulness, at first slight, but gradually increasing, are as valuable physical signs of phthisis as any we possess. I mention this fact, because it proves that one of the permanent characteristics of phthisis is the presence of more or less bronchitis.

As the bronchial hemorrhage in phthisis is generally small, and finds a ready exit, it will not be easy for you to confound it pulmonary apoplexy. The bronchial engorgement which ons this hemorrhage often sets in at an early period of cular phthisis. When this happens, a curious hemoptysis occur, and may be the first symptom which attracts attention state of the lungs. Hence hemoptysis is often erroneously dered as the cause of the consumption. I beg you to rk, that the bronchial tubes are also the principal source of uriform expectoration which attends consumption, and that e not to suppose that it comes exclusively, from the cavities e lung, for the quantity expectorated is by no means in rtion to the size of such cavities.

ain, where the hemoptysis happens to be copious, it is ht to arise from ulceration, or erosion of the coats of the es which accompanies the tubercular destruction in the An occurrence like this is, I believe, extremely rare d. Such an injury is too serious, and would be followed rapid a fatality. Nay, you will even find, on dissection, he bronchial tubes may be cut across by ulceration, and other part of the tissue of the lung destroyed, while the of the artery remain comparatively uninjured and its cavity rated, so that you can trace it passing like a string through scess. Neither have I observed that the hemoptysis which in phthisis is produced by the ulceration on the mucous e of the bronchial tubes, though I do not know whether night not cause it when the ulceration is high up near the a.

hall detain you no longer on the symptoms of phthisical rrhage: only remarking that it is generally in the advanced that it appears, frequently from induced bronchitis and hard , in which case it is generally scanty, or from abscess, igh here, also, from the obliteration of the arteries before oned, it must usually be slight: as the symptoms of this, he symptoms which accompany common severe bronchitis neumonia, are easily recognized, and have been sufficiently bed in books. You will find that Cruveilhier instances es of the heart as a great cause of pulmonary hemorrhage. ubt this is true in many cases; for if there be a serious liment to the return of blood to the left auricle, it will induce nary disease, and you can readily conceive how the valvular ure of the heart may bring on hemorrhage from the lungs.

Now, gentlemen, while on this subject, I shall make one observation. Since Corvisart wrote his great book on Diseases of the Heart, and Laennec published his admirable discoveries, it has been the custom to call all hypertrophied hearts diseased. We must bear in mind that there are considerable enlargements of the heart in which we are not to look on the hypertrophy as a disease, but as a wise provision of nature for the prolongation of life. If a person be born with asthma, his heart will become enlarged, because during each fit a great degree of stress and labour is thrown on the right ventricle, and consequently that portion of the heart becomes enlarged, and is hypertrophied in the course of time. The same takes place to some extent in whooping cough, in bronchitis, or emphysema, which lasts for a considerable time. If an old man has constant cough and expectoration, and his lungs become emphysematous, hypertrophy takes place, and you will find his heart enlarged on examination after death. And are you to look on this as disease? Not at all; it is the means of prolonging his life: so also in many diseases of the valves which permit regurgitation. The practical bearing of the question is, that you should be very cautious in giving digitalis, and similar remedies, in such cases; for if you thereby weaken the heart's action, the obstacle to the transmission of blood remaining the same, you do your patient a great injury and contravene the wise purposes of nature.

I shall say nothing at present of the other diseases which produce hemoptysis, for, when speaking at a future occasion on the subject, I shall be able to show you how it may proceed from engorgement of the liver, purpura, or scurvy: at present let us proceed to the treatment. This, of course, must vary according to the source of the disease, for when it arises from the causes last mentioned, your treatment must be very much modified. Into a description of these passive hemorrhages I do not mean to enter, and shall only remark, that it is in such cases that opium should be given from the beginning, and in no other kind of hemoptysis.

In common cases you may, towards the termination of the disease, particularly where bleeding and other antiphlogistic means have been premised, employ this remedy with advantage. We know that there are many cases of hemorrhage where opium, by its action on the nervous and vascular systems, proves a powerful styptic. Instances of this are seen in its power of arresting the flooding of parturition, and in another kind of hemorrhage to which I would point attention, I mean, that bleeding from the gums which sometimes follows the use of mercury. I remember a case of this kind, in which the bleeding from the gums was extensive, and all remedies failed in arresting it. The medical gentleman who attended it had employed every means in vain, and came to me, at twelve o'clock at night, to see if I could tell him of anything that might be of service. I said to him, "Go home, and give two grains opium immediately, and then half a grain every hour until the bleeding stops." He seemed a little incredulous, but, however, made trial of the remedy as I directed, and before three grains of opium had been taken the bleeding ceased. This cursory explanation will, I trust, prove useful to you in practice.

In books you will find, that when you meet a case of hemorrhage, you should give immediately acetate of lead, with opium and other styptics; but remember, that in nineteen cases out of twenty, you should not give opium with or without acetate of lead in the beginning. When venesection has been performed, and the bleeding continues, then you may give it, and give it in large doses.

The remedies which I have spoken of are fitted for cases of slight hemorrhage, as that which occurs in phthisis; but when a person spits up a large quantity of blood from an affection of the bronchial tubes, or in consequence of pulmonary apoplexy, what will you do? Commence with bleeding your patient; and here a depressed state of the vascular system should not deter you from the adoption of an energetic practice. The person who gets an attack of this kind is frightened at the quantity of blood he spits; his face becomes pale, and his heart weakened in action—a fortunate occurrence—as it tends to diminish hemorrhagic excitement.

In all cases where bleeding is required, after venesection, the next remedy in which I place confidence is ipecacuanha, to be given two grains every quarter of an hour, until there is some improvement, and then every half hour or hour until the bleeding stops. Here I must remark that it is a mistake to suppose that it is the nauseating effects of ipecacuanha which alone produces a cessation of bleeding; tartar emetic nauseates too, but it will not so effectually arrest the hemorrhage. Richter, the author of the German *Elements of Surgery*, was the first who pointed out this anti-hemorrhagic effect of ipecacuanha, and Dr. Sheridan, of this city, has shown that it may be given with success in hematemesis, although it may affect the stomach so far as to produce vomiting; it exerts the same influence over hemorrhage from the bowels, as I have frequently proved in this hospital: I prefer it to acetate of lead.

I may be asked, do I reject the latter remedy? Certainly not; I give it, but only at the time I give opium; that is, toward the termination of the disease. Before I commence with the ipecacuanha I generally prescribe a purgative injection and a powerful saline purge, such as infusion of roses, sulphate of magnesia, and a little sulphuric acid. The purgative is intended in this case to act as a derivative from the lungs. We see every day the great sympathy which exists between the mucous membrane of the bowels and lungs, and we observe that in case of phthisis, and the chronic cough of old men, where purgatives have been administered in the latter disease, or where diarrhœa occurs in the former, that the discharge from the lungs is lessened.

I had an old gentleman some time ago under my care for one of those chronic coughs; he got tired of me, and went to Leamington and consulted an eminent physician residing there. He was purged very actively for a considerable time, and the expectoration and other pulmonary symptoms began to decline, and finally were entirely removed. He wrote several letters to his friends in Dublin, detailing the improvement in his disease, and abusing Dr. Graves for being unable to do anything for him. He returned to Dublin, the shadow of his former self, cured of his cough, and died in about a month afterwards. His case strongly evidences the remarkable influence which discharges from the stomach and bowels produce on discharges from the lungs, and gives you a reason for the powerful effects of purgative medicine in hemoptysis.

With respect to digitalis, I must confess that I never use it. There is another agent which you may employ in this disease; I mean the popular remedy of giving the patient a table-spoonful of common salt, and making him swallow it without water. I have seen this stop hemorrhagic effusion in the case of a friend of mine, when I was in the university, who was attacked with spitting of blood late at night. At that time the good old custom of shutting the college gates at twelve o'clock prevailed; we were in great alarm, and could get neither physician nor medicine. We gave him salt, which he chewed and swallowed, and, after three or four spoonfuls, the bleeding stopped. We may, perhaps, account for this by considering that the action of the muriate of soda on the mucous membrane of the mouth and throat is propagated to the air-passage and lungs; you may, therefore, if you like, while you are tying up your patient's arm in order to draw blood, give him a spoonful of salt, as it may produce a favourable effect.

I have but little to add to what is generally known respecting he termination and treatment of hemoptysis. It is strange to what extent a spitting of blood may proceed without being fatal. I attended a gentleman from Belfast, along with the late Mr. King and Sir Henry Marsh, who expectorated blood most copiously every day for more than two months; and yet he finally ecovered, and afterwards continued to enjoy perfectly good health, to my knowledge, for five years.

Another gentleman had repeated attacks of most violent hemoptysis, for which he was frequently bled, and subjected to he usual treatment; he had likewise accompanying pleuropneumonia often recurring, and which produced permanent dulness of a great portion of the upper lobe of the right lung; his pulse was at all times quicker than natural; and, naturally extremely tall and slender, he had gradually become quite a skeleton, while the action of the heart was violent, and could be felt and heard over the whole chest; the upper portion of the ight side of the thorax was not only dull but flattened, and in his portion respiration was very feeble, and, during the attacks of hemoptysis, mixed with crepitus. In this state he continued for two years, at times better, at times worse, rallying a little during the summer, but for the greater portion of his time confined to the house. At the end of that period I was again called to see him, and was astonished at the alteration in his countenance—an alteration produced by the total cutting away of all his teeth, the consequence of the long-continued and enornous doses of mineral acids taken for the purpose of checking the hemoptysis which had so often returned. I felt quite surprised at finding him still alive, for I believed that he had died of consumption several months before.

Under the circumstances I advised a voyage to *Australia*, but, on consulting Dr. Stokes and Sir Henry Marsh, I agreed with them in thinking his case too hopeless to allow us to permit such an experiment to be tried. Another year passed away, when we were again called to see him, and found matters apparently unaltered—no improvement, no aggravation either of the physical signs or constitutional symptoms; we now all agreed in thinking that as he had so unexpectedly survived, the voyage to Australia might be permitted. Accordingly he sailed in September, and perfectly recovered in New Holland; at a subsequent period he unluckily became ardently engaged in an attempt to convert some of the South Sea Islanders, by whom he was killed and devoured. His was in truth a remarkable recovery, not only from repeated and terrible attacks of spitting of blood, but from many of the constitutional and physical symptoms of advanced phthisis.

While this sheet was going through the press, I received a letter from a gentleman whom I had recommended to go to Australia for an attack of hemoptysis; as it not only bears valuable testimony to the advantage of that climate in this disease, but also contains most interesting information about one of the most rising colonies of Great Britain, I make no apology for introducing the greater portion of it here. The letter is dated from Melbourne, Port Philip, March 1st, 1848:—

"In 1839 I consulted you for an attack of hemoptysis, when you strongly recommended me to come to this colony; and previously to my sailing you expressed a wish that I should write to you as soon as I had sufficient experience of the effects of the climate on my constitution.

"I fear I can scarcely offer any sufficient excuse for so long a silence; however, a residence of upwards of eight years enables me to speak with greater confidence of the country and its climate than I could have done had my experience been less.

"Our voyage occupied 108 days, during the entire of which I enjoyed excellent health; in fact, I never suffered one hour's illness of any description the entire time; and, on landing, my constitution seemed completely renewed, and I had increased about fourteen pounds in weight.

" On our arrival, the colony was in its infancy; and we were
bjected to all the inconvenience or rather hardships arising
om this cause. No lodging of any description could be obtained.
ter a residence of upwards of a month in a tent, I purchased
sheep station in the bush, about fifty miles from town, where
have since resided. For some time my health remained very
od, but unfortunately I overrated my strength, and, urged by
e 'auri sacra fames,' made extraordinary exertions to make my
w concern productive. When travelling over one of the large
ains with which this country abounds, with my drays, I was
ertaken by heavy rain, which in a few minutes wetted me to the
in. I was wet for upwards of seventeen hours; I did not sub-
quently take the precautions prudence would suggest, but con-
ued my avocation as usual. A slight affection of the chest
s the result; nothing however very alarming until about four
onths, when I over-strained myself breaking in a young horse,
d immediately observed a little blood in my mouth, and
ring the night I was attacked with a violent renewal of my
mer complaint, which continued for ten days or a fortnight.
the end of that time I was enabled to go to town, when I
nsulted a doctor. He examined my chest carefully, without
ing able to detect any disease; and stated that he thought that
care my health would be restored. I speedily recovered from
is attack, and up to the present have continued in the enjoy-
nt of good health; I have had occasional colds, and sometimes
ve been troubled for a short time with dyspepsia; on the whole,
wever, I have every reason to be thankful. I am never troubled
th cough, and, with the exception of a few days confinement,
sed by hemorrhoids, have never kept my bed a day since I
ived here: between six and seven years have elapsed since the
t attack of hemoptysis. I lead an active life, but carefully
id any *violent* exertion, mostly spend some hours on horse-
k every day, and can ride fifty or sixty miles at a stretch
hout fatigue. I perfectly recollect, when advising me to
ve Ireland, you stated that should I even *descend* ten or twelve
grees in the scale of society, such a consideration should not
er me from taking this step. I am happy to inform you that
ave, *at least*, maintained my '*grade*,' while my capital has
reased in a far greater ratio than I could have expected had
emained at home.

"It is true a period of great depression, the result of over speculation in land, has been experienced, during the continuance of which the settlers had much to encounter; but the colony is now in a prosperous state. The greatest drawback we experience is the want of an adequate supply of labour to develop the resources of the country. We pay married couples £40 to £50 per annum, single men £28 to £30; find them lodging and as much of the best food as they can consume; the ration for each person weekly is—10 lbs. flour, 12 lbs. meat, 4 oz. tea, 2 lbs. sugar, vegetables, &c., but this seldom satisfies them; we have generally to give more; servants are so scarce, that they are in a certain degree masters, and we are well accustomed to submit to insolence, disobedience, and idleness. It grieves me to read of the misery and starvation at home. What a blessing to both countries if government would send us 20 to 30,000 of these poor people annually. It would enable us to carry on our operations in a satisfactory manner, and what a change for the poor people themselves, instead of being a burthen to others! The moment they landed here, they would become independent members of society.

"As I am aware you are consulted by numbers suffering from complaints of the lungs who might wish to try this climate, I will say a few words about the country and the present prospects of emigrants. The climate is particularly dry, the degree of heat very variable. I have seen the thermometer change from 54° to 105° in two days, but owing to the absence of humidity in the atmosphere, the heat, although very great at times, is by no means so oppressive as at home (I still call Ireland home), when the thermometer stands 20 to 30 degrees lower. I have been obliged to ride a long journey when it stood at 114°. From the great and sudden variations in the temperature rheumatism is prevalent; but I consider the climate decidedly favourable to people with delicate lungs;—one case I will mention. A young gentleman, son of a Scotch baronet, arrived here some time after me; for several years before he left Scotland, he describes his life as having been quite a burthen; he suffered frightfully from asthma—was only kept alive by the greatest care, spending a considerable part of his time in bed. On him the voyage and subsequent residence here acted in a manner almost miraculous. He resided three or four years at my station;

has now a station of his own, and is a stout able young man,
to endure any fatigue—he has never suffered one week's ill-
s since his arrival here, now nearly eight years. Delicate
ple arriving here, feeling invigorated by the voyage, make too
with themselves either by over exertion (as in my own case),
by the use of stimulants, and do not derive that benefit from
change they otherwise would; a bush life will also answer
m much better than a residence in town. Melbourne, our
ef town, is very unhealthy, being in the vicinity of some large
rshes. Geelong, the second town, is built on rising ground,
se to the sea, and is considered healthy.

'Intemperance prevails to a great extent: I have seen as
ny as six deaths reported in one week from 'delirium tre-
ns.' Lunatics (or cranky people as they are colonially
med) are frequently met, owing to excessive drinking and
osure to the nearly vertical rays of the sun, often whilst
xicated. Last October (our spring) almost the entire
ony was visited by an influenza which few escaped; in some
es it proved fatal. Fever and dysentery occasionally are pre-
ent in town; they can generally be traced to local causes.
ease of the heart is not uncommon; some attribute it to
ess of smoking and drinking inordinate quantities of green
—practices indulged in to a great extent.

'I like the settler's life uncommonly well; my principal
upation consists in riding to out-stations, looking after the
pherds, and generally superintending operations."

n the case of another gentleman attended by me and Dr.
kes, suffocation had nearly resulted in a manner not hitherto
iced by authors. This gentleman had been ill for many days,
l been very often bled, and was much exhausted. I had visited
n in the morning, and had but just left him when a fresh burst
blood took place. Contrary to my orders he was again bled,
l when Dr. Stokes arrived in about three-quarters of an hour
rwards, he found him collapsed—almost asphyxiated, and
ggling for life; the right side of the chest expanding and
tracting energetically, *the left almost fixed and motionless.*
Stokes immediately changed his position, and gave him a
ss of wine, when he made one more effort *and violently*
ectorated a coagulum consisting of fibrin, in some parts
rly colourless, forming a complete solid mould, answering to

the left bronchus and its ramifications, down even to some of the minuter tubes. After this he rallied, and for the time was tranquil.

In violent hemoptysis medical men are too apt to have recourse to venesection over and over again, bleeding from the arm every time the spitting of blood returns. Strongly as I advocate the necessity of using the lancet boldly when a patient is suddenly attacked with a copious discharge of blood from the lungs, yet I conceive that much injury is frequently inflicted by a too frequent repetition of the venesection. If, after two or three free venesections, performed in the commencement of the disease, the pulse still retain its hemorrhagic character unsubdued by the loss of blood, and hemorrhage still exhibits a tendency to return (usually at a certain hour), the practitioner may rest assured that he will not be able to prevent that tendency by further venesection. In cases, then, where bleeding from the arm is found neither to prevent nor diminish pulmonary hemorrhage, we must not add to our patient's exhaustion by repeating it, and must steadily refuse when pressed to do so by the patient himself or his friends; *for the prejudice is general that bleeding from the arm is proper whenever a patient spits blood in quantity.*

It is true that the cases which are not benefited by bleeding are invariably of a most dangerous nature, and will terminate in most instances fatally, no matter whether we bleed or not. Still, when we have once convinced ourselves that bleeding has ceased to be *evidently beneficial* either in arresting or preventing the fits of hemoptysis, we must not hazard our patient's chance of recovery, however slight; we must, on the contrary, husband his strength, and use the means generally recommended in so-called passive hemorrhage: acetate of lead in frequent doses, two grains every hour, with one-sixth of a grain of opium; large doses of sulphuric acid with or without alum, small doses of oil of turpentine—ten drops every quarter of an hour, given in cold water, while the spitting of blood continues; and finally, in unmanageable cases, ipecacuanha given in nauseating doses, constantly repeated until full vomiting is produced over and over again.

Such are the means which the physician will employ internally in these almost desperate cases: when much debility ensues from repeated loss of blood, wine and opium may be given boldly.

ıl bleeding has appeared to me so useful as a constant f blood from the hollow of the throat just above the The efficacy of leeches applied to this situation in s and other diseases attended with harassing cough ago pointed out by Dr. Osborne: and I was induced, quently observing the admirable effects of this practice, l its application to cases of hemoptysis, and I am happy at it has proved a most excellent *adjuvant* in arresting ress of this frightful complaint. When the cough is ing, and the quantity of blood expectorated very large, es should be applied every sixth hour until decided obtained; in less severe cases a smaller number applied l be sufficient. When the disease is obstinate, a succesrge blisters to the chest may be applied with advantage. respect to the danger of phthisis supervening in cases ng of blood, it is remarkable that in recent cases of sis we cannot predict the event with any degree of ; for it often happens that the chest is everywhere clear sion, and free from morbid rales, and pulse natural and fling, in the very individuals that at some future period ubjects of phthisis. In other persons a violent attack of sis recurs over and over again during several weeks, and es, leaving them much debilitated but without cough, tethoscopic phenomena, or fever.

ıedical attendant must in such cases be very guarded, ver flattering the appearance may be, convalescence will appear to have commenced when the pulse will begin to gh set in, and in a few days afterwards manifest dulness itus will be discovered under one of the clavicles; in fact, ısumption has commenced. In other patients, after an ı apparently perfectly recovered from, no symptom of exhibits itself until the constitution is worn out by losses of blood, when tuberculization commences suddenly es rapidly.

DISEASES OF THE HEART.

LECTURE XLVII.

PERICARDITIS.

Gentlemen,—Recent writers have contributed much to cardiac pathology, and, if we credit all they assert in their books and essays, have left but a scanty harvest to be reaped by their successors. My own experience, however, has been very unsatisfactory, inasmuch as it has not unfrequently appeared at variance with the rules laid down by authors, and I have consequently been led to believe, that the means of distinguishing diseases of the heart from each other have not been yet brought to the alleged degree of perfection, and indeed many reasons induce me to conclude that such perfection is unattainable, for we can localize disease of the heart only by the following means: first, by the sort of derangement each induces in the circulation and its associated functions; secondly, by the change such disease produces in the motions of the heart as felt by the patient, or as perceived by the eye or hand of the observer; and, thirdly, by the morbid sounds developed during the heart's action.

The numerous observations and dissections I have made have convinced me, that the functional derangements produced by diseases of any part of the heart, are not in all cases sufficiently characteristic to enable us to make out whether the disease be situated in the auriculo-ventricular or semilunar valves; nay, it has frequently occurred to me, that all the symptoms supposed to be indicative of disease of the right side of the heart have been occasioned by diseases of the left side, and *vice versa.* So far, indeed, from symptoms being always precise enough to point out the seat of the disease, they are often insufficient to indicate its very existence, an assertion proved by numerous specimens exhibited at the Pathological Society.

The chief means of distinguishing which of the valves of the art is diseased are derived from the supposed direction of the und. This is by far the more useful diagnostic mark we ssess, and by it we may often, but not always, distinguish sease of the right from disease of the left side of the heart; d we may even occasionally, though not always, distinguish seases of the auriculo-ventricular from those of the semilunar lves. Another means of diagnosis much relied on is taken m the morbid sound accompanying, and therefore being a per-rsion of the first or of the second sound of the heart; but as at h motion of the heart valves are opened and valves are closed, morbid sound may be produced by any change of structure ich permanently prevents the complete opening or shutting of e valves, and consequently the same sound may arise either m changes of structure obstructing the advancing blood, or m changes permitting regurgitation; in other words, it is possible to judge at the moment a sound occurs, which of these its cause.

As to the motions of the heart, their derangement scarcely ever dicates the seat of disease with any precision.

In illustration of this position, I shall refer briefly to some ints connected with the case of an old man in the chronic rd, who died lately of inflammation of the lung. At the period his admission, he had been ill for some time; both sides of e chest, but particularly the left, sounded dull on percussion; had extensive bronchial respiration and crachat rouillé; in ct, it was a very bad case of double pneumonia, a disease which his time of life is very seldom cured. We did all we could arrest the progress of the disease; we cupped him over the ft side, gave him mercury so as to affect his system, and applied isters to both sides of the chest, anteriorly and posteriorly. hese were the only active measures which remained for us to nploy; from the man's age, the weakness of his pulse, and the ration of the disease, we could not venture on general bleed-g; we could only attack the disease with local depletion, ercury, and counter-irritation.

All these remedies were applied with great diligence, but fortunately proved incapable of checking the disease. His ugh continued, respiration became more difficult, and though s mouth became affected, the dulness on percussion increased day after day; and though the patient was removed into a warmer room, and every attention paid to his comfort, it was evident that he was getting gradually worse. About a fortnight after his admission, his expectoration assumed the purulent character, and it was obvious that the lung had passed from the stage of hepatization into that of interstitial suppuration. He took the decoction of polygala, with Iceland moss and syrup of white poppies, but without any relief to his symptoms; the disease increased, and he died on the 19th, sixteen days from the date of his admission.

On examining the lung, the ordinary phenomena of pneumonic inflammation were discovered; parts of the lung were in the state of grey hepatization, others were infiltrated with pus, and broke down easily under the finger. We found, too, that he had not only pneumonia, but also extensive pleuritis and *pericarditis*. The pleurisy had probably commenced about eight or nine days before his death; the pericarditis was of an origin somewhat more recent.

You may ask why I did not recognize these affections before death. The reason is twofold. The man was in a very weak and hopeless condition, and both sides of his chest were sore from the blisters; these are circumstances under which I have strong objections to torment a patient with examinations, and therefore I made none in this case. The other reason is, that in a patient who has been greatly reduced by some acute disease, new inflammations are apt to spring up with great rapidity, and with still greater latency. I remember a very remarkable case of the same description which occurred at the Meath Hospital, where the patient had a very extensive inflammation of the pleura, with exudation of lymph and effusion of a considerable quantity of fluid, and yet not one of these symptoms was recognized during life.

This man, you will recollect, never complained of pain in the side, nor had he orthopnœa, irregularity of pulse, lividity of countenance, or any of those symptoms which are looked upon as indicative of pericardial inflammation; yet on dissection we find the pleura extensively engaged, lymph exuded on its surface, and a small quantity of sero-purulent effusion in its cavity; and on examining the heart, we find the pericardium covered internally with an extensive gelatinous layer, consisting of lymph and puriform fluid intimately mixed together. You perceive, then, in this case, a confirmation of what I have so often insisted on, that pleuritis may occasionally run through its course, unaccompanied by pain in the side; and also that inflammation of the pericardium may exist without orthopnœa, irregularity of pulse, lividity of countenance, or fainting, symptoms formerly believed to be more or less manifest in every case of pericarditis.

The pathology of pericarditis has been investigated but lately with the care it deserves: the labours of our French brethren were in the first instance mainly instrumental in producing its present degree of advancement. In England some valuable observations have been contributed by Drs. Hope, Latham, and others, but they have been more than rivalled by the contributions to the diagnosis of this disease which have appeared in the *Dublin Medical Journal.*

Pericarditis is a disease of quite as frequent occurrence as pleurisy, and often, as in the present instance, associated with the latter; on the whole, I do not consider pericarditis as more dangerous or more difficult to cure than pleuritic inflammation, neither does its existence seem less easily ascertained. Some cases, it is true, are extremely insidious in their nature, but the same may be said of cerebritis, pneumonia, and all other phlegmasiæ; usually, however, a careful and attentive physician will at once detect the existence of pericardial inflammation.

When he finds that a patient has been exposed to causes capable of exciting fever, that he has been liable to gout or rheumatism, or has been actually attacked with either, then will his attention be directed to the heart; if he perceives that its action is either unusually violent or irregular, or if he observes that uneasiness and oppression of chest are complained of to a degree not to be accounted for by any pulmonary lesions present; if he finds that his patient has the appearance of a person labouring under some serious disease, and that none such exists in the lungs themselves, then will he be called on to examine the region of the heart with the greatest accuracy.

One of the most common symptoms of pericarditis is tenderness in the intercostal spaces over or near the heart. This is not perceived in many cases until pressure is made with the fingers. Tenderness occurs in many who do not complain of pain or stitch in this portion of the chest; when the latter co-exists with tenderness, the presumption in favour of the presence of pericarditis is still greater. The pain and uneasiness about the heart are, as Dr. Elliotson remarks, generally increased by pressing in the left hypochondrium upwards towards the diaphragm. I must refer you to Dr. Stokes' and Dr. Mayne's papers in the *Dublin Journal* for an analysis of the physical signs derived from percussion and auscultation, and also for an explanation of the reasons why the general symptoms are subject to such striking variations in this disease.

In some you have, soon after its commencement, lividity, orthopnœa, and tendency to fainting, combined with irregularity of pulse; in others the disease runs its whole course, whether it terminates fatally or in health, without any of these symptoms; in fact, no disease is more inconstant in its characters, and none requires more the aid of investigation by means of physical signs, which, if well conducted, seldom fail to clear up all doubts. Of one thing I am certain, that inflammation of the pericardium in a person of tolerably good constitution may be generally arrested in its progress by bleeding, frequent leeching, and scruple doses of calomel. It is mere trifling on such occasions to have recourse to tartar emetic, digitalis, or the common antiphlogistic remedies. Instantly use every effort to produce the full action of mercury on the system. Apply the ointment to the axillæ; smear it over the inside of the thighs; make your patient respire the vapour of hydrargyrum cum cretâ as often in the day as he can bear the process, and be assured that you are pursuing the proper course.

Well has it been observed by Dr. Elliotson, when speaking of a fatal case of pericarditis:—"The only chance I had to save the life of this person would have been to have pushed the mercury further. I am quite sure that more lives are saved in inflammatory diseases by carrying mercury to a great extent, than by merely having recourse to it for the simple production of ptyalism." It is to the want of decision in the practice of the French physicians — it is to their want of confidence in mercury—that we must attribute the greater mortality of pericarditis in Paris than in Dublin; for most of our patients recover, most of theirs die. Of course, gentlemen, the most unfavourable of all cases is where pericarditis attacks a person debilitated by previous sickness, such as fever, dropsy, &c.

e the disease runs a very rapid, and too often a fatal course, cannot be controlled. One practical remark I cannot avoid tioning here—before effusion takes place into the pericardial never apply a blister; after it has occurred, repeated and re blistering over and about the region of the heart is one of best remedies.

ome years ago I had an opportunity of studying a case which sequently proved to be an example of inflammation of the scular substance of the ventricles, ending in suppuration and formation of a large abscess in the ventricular parietes. is is a very rare occurrence, for the simple reason, that lammation of the substance of the heart generally proves l before pus is formed. A very robust gentleman, aged 55, m the neighbourhood of Wicklow, came to Dublin for the efit of advice. He had complained of cough for many nths, together with dyspnœa and palpitation of the heart; terly he had become anasarcous, and suffered much from tress and pain referred to the region of the heart. This n formed the chief subject of his complaint, and darted over chest.

n examination, I immediately detected hypertrophy and tation of both ventricles, and I announced the existence of ular disease, inasmuch as a loud and extensive *bruit de flet* existed, together with a remarkable *frémissement cataire,* a very irregular pulse. This opinion was delivered in the ence of Dr. Sherwood and Mr. Hetherington. Our patient rned to the country, where he continued to complain of pain e heart that was at times excruciating. He died suddenly e end of a few weeks.

he results of the post-mortem examination were kindly municated to me by Dr. Sherwood. There was considerable sical effusion into both pleural cavities, and the heart was edingly enlarged. "On slitting open the pericardium, I d (says Dr. Sherwood) that the heart adhered to its entire ace by means of bands of coagulable lymph, which were ly broken down except at the apex of the heart, where they very strong and firm. In attempting to break them, more two ounces of purulent matter escaped into the cavity of pericardium, which caused me to institute a very close mination of the parts, in order to discover whence the pus came. I found a small rent in the apex of the heart, immediately below the floor of the left ventricle, exactly in the situation of the firm adhesions before spoken of. On enlarging this opening, I discovered a cavity in the substance of the heart, with a regularly defined wall, capable of containing more than two ounces of fluid. The walls of both ventricles were enormously thickened; all the valves were more or less affected; but the chief disease lay in the semi-lunar valves of the aorta, which were nearly altogether ossified."

This case was extremely remarkable, and exhibits an example not merely of the dropsy and dyspnœa which so usually attend hypertrophy and valvular disease of the heart, but also of a combination of chronic pericarditis, and chronic inflammation of the muscular substance of the ventricles, *ending in the very rare termination—abscess.*

It is deserving of notice that, in many cases, increase of energy in the heart's action precedes the appearance of the more characteristic and essential signs of pericarditis, a fact seeming to denote that the disease often commences in the muscular substance of the heart, and from that extends to its investing membrane. Some years ago, Sir Henry Marsh, Dr. Lees, and I saw a case strongly illustrative of this opinion. An athletic young gentleman contracted a very acute rheumatic fever from cold; the pulse was very high, the heat of the skin excessive, and the pain, tenderness, redness, and swelling of the joints were of more than ordinary severity. He would not allow himself to be bled; we employed an antiphlogistic treatment, and were constantly on the watch to detect the first approach of pericarditis. One night Dr. Lees detected intermission of the pulse; this, in a few hours, was followed by increased strength of the heart's pulsations, and finally pain was felt. In many other instances I have observed irregular action of the heart to be the first signal of the approaching pericarditis; it is of importance to remember this, for it teaches us to attach more value to this symptom as a precursor of inflammation; and, besides, it proves that irregular and intermitting pulse may, in pericarditis, precede effusion, and not necessarily arise from the impediment which the latter, when it takes place, must throw in the way of the heart's action.

No disease requires more attention than pericarditis whether we consider the importance of the organ engaged, the frequency of its occurrence, or its often insidious and latent progress. In studying this affection, we can derive little or no assistance from ancient or even modern authors, except of the most recent date; for inflammatory affections of the heart and its investing membrane were either completely overlooked or grievously misunderstood, until long after the investigations of Laennec had disclosed the advantage of physical signs. It was then discovered that, contrary to the received opinion, pericarditis and endocarditis must be ranked amongst common affections, and that they are accompanied, during their origin and progress, by physical signs highly characteristic, and of such importance, that they enable the practitioner not merely to distinguish the first stages of the attack, but to anticipate its origin and extinguish it at its very commencement. The truth of this assertion is proved by every day's experience; and we have now the satisfaction of knowing that inflammation of the heart and its membrane is not necessarily either fatal or intractable.

Still, however, as I have already remarked, we must not suppose that recent investigations have satisfactorily established the value or the meaning of all the physical signs that can be detected from the commencement to the termination of inflammatory affections of the heart, for the nature and position of the organ engaged, whose motions can be seen, felt, and heard, occasion changes in the physical signs, which alter and vary from stage to stage, from day to day; nay, sometimes from hour to hour. The study of variations so numerous, and yet so important, will require the co-operation and well-weighed testimony of many observers; with a view of promoting the cultivation of this fertile field, I beg your particular attention to the following remarks, which will, I trust, contribute to enlarge and render more accurate our views in certain points connected with this department of pathology. Let me first remind you that the sounds produced by pericarditic friction, closely resembling those derived from valvular disease, as so well proved in the following case, and then point out the means of diagnosis:—

A man named Mulcahy, aged 23, was admitted December 1st. He stated that he had led a very intemperate life, his usual allowance being from six to eight glasses of whisky daily. He earned a livelihood by playing on a wind instrument, and after a few hours' performance used to suffer from distressing palpitations and pain about the heart. At times he was affected w a sense of fainting, which usually terminated in vomiting. followed his avocation till about two months before admissi when he was attacked with rheumatism, and shortly after w great dyspnœa, anasarca, &c.

On admission, his surface was cold, lips and hands livid, l swollen and belly distended. He suffered from dyspnœa; cou with bloody expectoration; his eyes were staring and protrud face tumid; jugulars turgid, but not pulsating; pulse regular, but small and weak; respiration 28; urine scanty highly albuminous; extreme debility. The left lobe of the li occupied the epigastric region, in which situation alone press caused pain. He had slight pain in the right shoulder. Th was no dulness except over the lower and back part of both lun where the respiration was weak and accompanied by a m crepitus; the cardiac region sounded duller than natural.

The motions of the heart were evident, strong, diffused, accompanied, not by the two natural sounds, whose duration tone are so different from each other, but by two loud, prolon sounds, of equal duration but of different tones; the first wa *bruit de scie*, the second was a musical sound closely resembli the noise made by rubbing the moistened finger on gla These phenomena were only heard at the base, and were qu inaudible at the apex of the heart; but they extended from base along the aorta, and were very distinct under both clavicl particularly the left; they were not heard either in the carot or in the cervical portions of the subclavians. In no situat was there the least frémissement; no thrill in any of the arte of the neck or upper extremities; no abnormal sound over abdominal aorta. The next day, his condition was much same, except that instead of the musical sound we had a w marked and loud *leather creak*, very much prolonged, and maski the normal second sound, and a strong frémissement was over the base of the heart; there was no increase of dulne The pulse continued regular, 72; the respiration only 20; he was evidently sinking, and on the following morning he di

The following is the result of the post-mortem examinatio —General anasarca; both pleural cavities occupied by a la quantity of fluid, upon which the lungs floated: on the left s the heart was bedded in the lung, and both were carried i lose apposition with the internal parietes of the chest, so as to bring the heart into extensive contact with the sternum and costal cartilages. There was no fluid in the pericardium, but its surfaces were coated with lymph, shreds of which extended from one surface to the other at the base of the heart. In this situation, the lymph appeared to have been very recently effused; it was easily removed, and presented an irregular honeycomb appearance. At the apex of the heart, the opposed membranes were firmly united. The heart itself was hypertrophied and both its ventricles dilated. All the valves, the endocardium, the aorta, and pulmonary artery were quite free from the least trace of disease.

There were many particulars connected with this case that might have led a practitioner to consider it was one of valvular disease. From the man's own account it appeared that he had for a long time suffered from palpitations, faintings, dyspnœa, anasarca, &c.; and his mode of life and occupation frequently produce that affection; but the physical signs were more likely to mislead than either the history of the case or the general symptoms. He had an enlarged heart, detected by increased dulness, two prolonged sounds masking the natural sounds of the organ, not audible at the apex, but exceedingly distinct over the origin and course of the aorta, one of these sounds having a perfectly musical tone. At our first visit these circumstances, taken in connexion with the absence of frémissement over the heart, or of pain or uneasiness about that region, together with the state of the pulse, might have easily led to a wrong diagnosis.

But, on the other hand, the phenomena differed in many points from those *supposed* to be indicative of disease of the aortic valves. The sounds, though heard to a great distance, did not follow exclusively the course of the aorta or its trunks; they were not heard either in the carotids or subclavians in the neck, nor was there any thrill or visible pulsation in these vessels; and, in addition, the sounds appeared, when examined by the stethoscope, to be derived from a superficial source, and were almost equally intense over a large space. These were the circumstances that induced me to look upon the case as pericarditis.

The next day the matter was put beyond doubt, for the musical sound had disappeared, and was replaced by a leather creak, attended by a strong frémissement over the base of the heart. During all this time the pulse remained at 72, was perfectly regular though weak; but the action of the heart was much stronger than natural, a circumstance frequently observed in this disease.

The manner in which the heart was pushed against the bony parietes of the chest, satisfactorily explains the fact of the sounds being heard to so great a distance, the organ itself at the time acting with more than usual vigour. But what were the conditions that gave rise to the musical sound? Let us reflect for a moment upon the actual state of the heart and pericardium in this case. If we examine the parts when removed from the subject, seeing the heart collapsed, and the pericardium loosely surrounding it, we cannot then understand how such sounds could be produced by the motion of the one within the other. But such is not the condition of these parts in the living body: the pericardium is there firmly fixed at its apex and base; it is tense and stretched like the parchment of a drum; and if in this bag we have an enlarged heart moving slowly backwards and forwards, the heart itself being turgid with blood, and rigid from the contraction of its muscles, we have the conditions that most probably gave rise to the sounds described, the true intensity and loudness of which would of course be altered and vary according to the varying condition of the two surfaces rubbed together. And it is well known that membranes, similar in structure to that covering the heart and lining the pericardium, have their surfaces altered by inflammation remarkably and rapidly, being at one time smooth and dry, and then becoming quickly smooth and moist, and afterwards covered either with puriform matter or denser lymph, which latter may coagulate, forming on the rubbing surfaces either a punctiform roughness, or ridge-like pseudo-membranous projections; and it is evident that each of the conditions now enumerated must alter the tone of the sounds produced by the friction of the opposing surfaces, or affect their loudness and duration.

Pericarditic sounds may therefore be as loud *and as prolonged as valvular sounds*—a fact hitherto scarcely sufficiently dwelt upon by pathologists, indeed by most disputed altogether; pericarditic sounds, moreover, like valvular, may be likewise accompanied by frémissement; and, consequently, in endeavouring to he diagnosis between the two sets of sounds, we must r means of distinguishing them, not in their loudness, ne, or their duration—not in the presence or absence of ement, but in the fact that pericarditic sounds appear to entive ear to issue from a more superficial source, are nore extensively diffused, and are almost equally audible ons of the chest very distant from each other, as, for e, under both clavicles. Pericarditic sounds, too, undergo uicker alteration in character than valvular, which, when rmed, are almost always permanent; and, to conclude, litic sounds seem to be conducted by the solid parietes hest, while valvular sounds are chiefly propagated by the s and parietes of the great vessels.

following case, published by Dr. Watson in the *Medical* , illustrates in a strong manner the peculiarities of peri- sounds which I have just alluded to. He says that in e the murmur "represented very exactly the upward and rd action of a saw on rough wood, was by far the loudest f this kind that he ever heard. It was distinctly audible e *whole of the chest*, both before and behind, only some- inter as the distance from the heart became greater: with r upon either scapula, you might have supposed that you tening to the deep buzzing vibrations of the larger string ss viol." At the post-mortem examination it was found e pericardium was everywhere, except at its posterior vered with a " thin coat of *firm* grey lymph, quite rough inute papillæ, projecting from almost every point of its of an almost *horny consistence*, harsh and resisting to ch."

following case is, in many particulars, extremely worthy e, and is unique, so far as my experience goes, in this, e rheumatic inflammation seized the pericardium *before* its. This fact proves that physicians have been hitherto ne to attribute pericarditis, carditis, or endocarditis, to sis, a doctrine applicable to some cases, but by no means for, as in the present instance, the first symptom of a tic inflammation may occur in the pericardium before any joints are affected; and in the case of Reddy, which I xt refer to, the pericarditis began at the very time that r inflammation had reached its maximum intensity.

But if the heart and its investments may be thus attacked at the very beginning, or during the acme of rheumatic fever, it is easy to believe likewise that inflammations of the heart and membranes may commence for the first time towards the termination of rheumatic fever, when the articular inflammation has almost disappeared, and, under such circumstances, a superficial view of the phenomena discovers the easiest explanation in metastasis; neither is it unimportant to observe, that the fever usually accompanied by inflammation of the joints, and termed rheumatic fever, is a fever *sui generis*, and as readily distinguishable from the fever caused by inflammations, as is the fever of typhus, small-pox, or measles. In truth, in rheumatic fever the quickness of the pulse, heat of the skin, tendency to profuse sweating, debility, restlessness, and thirst, may all exist without any inflammation of the joints, and may be resolved without such inflammation ever occurring; as I have witnessed in several well-marked cases of individuals liable to rheumatic fever, and who had previously suffered from attacks of fever with arthritis in the usual form, and subsequently, on exposure to cold, were seized with symptoms of pyrexia, which, in intensity, duration, and every other particular, were identical with their former fevers, save and except that from beginning to end not a single joint was inflamed.

But, it may be asked, am I correct in calling such a fever *rheumatic?* My answer is that in the instances referred to the urine was exactly the same as in former attacks, and the sweats, whose abundance by no means alleviated the fever, had a peculiar odour which never occurs except in rheumatic fever; another characteristic mark was likewise observable, viz., that though the fever was intense, thirst considerable, and tongue furred, yet the appetite was not remarkably impaired, at least at the commencement of the fever. These considerations are of practical interest, and prove that in the treatment of acute rheumatism we cannot hope to cure the fever directly by means which merely tend to get rid of the articular inflammation. *As arthritis may exist without rheumatic fever, so rheumatic fever may exist without arthritis; when combined, they each aggravate the other, but the cure or disappearance of one does not necessarily determine the removal of the other.*

The case is that of a woman, aged 19, named Fitzgerald, who was admitted September 1st into the hospital, labouring under febrile symptoms of a trifling character. She complained principally of headache, with loss of sleep. Her pulse was quick and her tongue foul. For these symptoms she was treated, and everything seemed going on favourably till September 5th, when the following observation was made:—

Face pallid and anxious; breathing hurried, 40; alæ nasi dilated at each inspiration; pulse has fallen from 90 to 59, very *weak, irregular, and intermittent;* no cough nor pain in the chest; no palpitation; physical examination did not detect disease anywhere except over the cardiac region, in which there was a distinct friction sound, accompanying both sounds of the heart. It was most intense at the apex of the organ, and appeared to accompany the first sound more particularly. It was attended with a very perceptible frémissement; in no situation had it the character of a "*soufflet.*" The impulse of the heart was exceedingly strong, and its sounds very loud. She was cupped over the heart, and put on the use of calomel and opium, five grains of the former with one of the latter, every fourth hour.

September 6th.—Countenance much improved; pulse 72, full and soft, but still irregular and intermittent; respiration 28; alæ nasi not dilated; no pain in any part. The *friction* sound is still very evident, though less intense, and particularly at the apex of the heart; no dulness, impulse stronger than on yesterday, sounds of heart very distinct. Blister over the region of the heart, and the pills of calomel and opium to be continued.

7th.—Mouth sore; pulse 76, small, soft, regular, *without any intermission;* respiration 28; countenance good; impulse and sounds of heart are both good; the friction is barely audible, being most intense over the right side of the heart. Pills to be continued.

8th.—No trace of frottement; the sounds and impulse of heart natural; pulse 80, regular and soft.

10th.—Was last night attacked with pains in the loins, knees, shoulders, wrists, and ankles. These joints are now exceedingly painful, red, and swollen. Pulse 80, small and soft.

It is unnecessary to go through the details of the case; suffice it to say, it ran the usual course of severe articular rheumatism, and lasted for about ten or twelve days. The heart was daily examined, and exhibited no sign of disease throughout. The treatment consisted of opium in large doses, *one grain every third hour;* it succeeded admirably, and seemed to expend itself solely on the disease; for during the whole time she was taking it, it never produced contraction of the pupil, headache, hot skin, furred tongue, or constipation.

M. Chomel has long since shown, that when the pulse becomes suddenly feeble, faltering, intermittent, or unequal, without any apparent or adequate cause, this sign, especially if attended with the usual concomitant symptoms of an obstructed circulation, affords the strongest evidence of pericarditis; and Dr. Hope asserts, that on this sign alone he has seen M. Chomel found a successful diagnosis in the last stage of a typhus fever, where the symptoms were extremely complex. Chomel's observation is, I think, correct, and leads me to discuss the motions of the heart in pericarditis and carditis more at large. *In some cases of pericarditis the heart's action becomes increased in strength for many hours before any physical sign of pericarditis can be detected,* and before any pain is felt in the region of the heart. In such cases, when the usually acknowledged symptoms of pericarditis are added to this already existing augmented action of the heart, the latter goes on increasing, and finally becomes excessively violent, and does not begin to decrease notably for several days after the peculiar symptoms of pericarditis have disappeared.

This course may be, perhaps, explained by supposing, as in the case which I mentioned at the beginning of this lecture, that the muscular substance of the heart became inflamed before the pericarditis came on, and continued to remain so after the pericarditis had subsided; for it is a general principle, that superadded inflammations generally yield to remedies, before the fundamental and primary disease exhibits a manifest improvement. In rheumatism, the action of the heart should be carefully watched, and when it becomes increased without any apparent cause, that occurrence alone is sufficient to warn us of the approaching danger.

This point has not, I believe, attracted the attention it deserves, and its importance is enhanced by the fact, that an increase in the heart's action may not only precede the physical, but the constitutional symptoms of inflammation of that organ or its membranes, and consequently may be the only beacon to forewarn us of a danger still beyond the visible horizon, and undiscoverable by any other means. Connected with the motions of the heart is the remarkable disparity that exists between the energy of the heart's action and the strength of the pulse; for it often happens that the pulsations in the cardiac region are violent, while the pulse is weak and thready at the wrist. This disparity consequently prevents us from deciding on the propriety of antiphlogistic measures by examining the pulse, a circumstance which shows us how erroneous *a priori* conclusions are in medicine; for surely it is in inflammation of the heart and its membrane that we should have expected the pulse to be our most certain guide.

In pericarditis it was formerly supposed that the pulse was nvariably accelerated, except towards the close of the disease, rhen the vital powers of the heart became exhausted, or its otions impeded by effused fluid. But this is so far from being orrect, that in several of my cases it will be found, that the ulse was not quicker than natural from the beginning to the nd of the disease; and in the boy Reilly, whose post-mortem xamination I shall just now detail, several German physicians f eminence who honoured our clinic with their presence, could ot be persuaded, by the evidence of the most indubitable hysical signs, of the existence of pericarditis, because, they id, in no such case could the pulse be natural in its frequency, ftness, and rhythm, and they were only convinced when the ericardium was opened. A perfectly natural pulse is not an nfrequent occurrence in pericarditis; but the case before us xhibits a very remarkable peculiarity, viz., *a sudden decrease f the pulse at the very origin of the disease.* Of this I have itnessed but one other example, where, in the commencement f pericarditis, the pulse fell to 36, and was extremely weak, ltering, irregular, and occasionally intermittent.

The gentleman whose pulse thus fell in a way similar to that f Fitzgerald, likewise recovered. The causes that produce uickness of the pulse in one case, and its slowness in another, every other respect apparently similar, will for ever remain ndiscovered; and the same observation probably applies to the uses upon which depends irregularity of the heart's action. is well known that certain forms of dyspepsia, hysteria, and nervous diseases occasion palpitations of the heart, and every variety of irregularity and intermission in the pulse, and that without any inflammatory or organic complication. When, therefore, inflammation attacks the heart or its membranes, palpitation, with irregularity, weakness, and intermission of the pulse, may be its indirect effects acting on the nervous energy of the heart.

This explanation seems the most satisfactory that can be advanced; but still we cannot help thinking, that the rhythm of the motions of the heart is sometimes directly interfered with by inflammation; nor is it difficult to conceive that where, perhaps, one auricle and ventricle are inflamed, while the other auricle and ventricle are free from disease, the simultaneous action of these parts may be deranged. Be this as it may, and whichever hypothesis we adopt, it is of paramount practical importance to recollect, *that a weak, irregular, and intermitting pulse may exist in the very commencement of pericarditis*, that it may not exceed the natural frequency, or, as in the two cases detailed, may fall much below that standard, and yet antiphlogistic treatment be required.

The result of my experience is that, in carditis and pericarditis, when the pulse is weak, irregular, and intermitting, when it is soft, natural in its frequency, or else morbidly slow, general venesection should never be employed; leeches over the region of the heart, cupping, blisters, calomel with opium, are best suited to this emergency, if it occurs during the acme of the disease; but when towards the close, our chief reliance must be placed on powerfully blistering the region of the heart, dressing the vesicated surface with mercurial ointment, and exhibiting internally small doses of calomel with large doses of opium, and, if necessary, wine.

Digitalis exerts little or no control over inflammation of the heart; and, like colchicum, if given in doses at all proportioned to the danger, it often suddenly produces dangerous or even fatal prostration of the nervous system. In protracted forms of cardiac or pericarditic inflammation, I have found colchicum combined with mercury and opium a useful adjunct; and where the disease is decidedly chronic, refusing to yield to treatment, much benefit is sometimes derived from hydriodate of potash.

Let me next call your attention to the case of the boy named Reilly, aged 14, admitted September 15th, 1841. He stated that a fortnight before admission he was attacked with shivering, headache, pains in the loins extending along the margin of the ribs, and with severe pain in the præcordial region and violent palpitations. Two days after, an eruption appeared. When admitted, he presented the appearance of one in an advanced stage of typhus. He was quite collapsed, feet cold, and hands blue. The surface of the body was covered with an eruption of a small size and elevated, giving to the hand the sensation of being covered with particles of sand. It was of a *miliary* form, and filled with a sanguinolent fluid. It seemed to have appeared in successive crops; for in some parts it was quite fresh, and the little vesicles were full and prominent; in others they were broken and levelled. Pulse 72, scarcely perceptible. He got wine and hot jelly, and warm stupes to his legs.

16th.—I saw him for the first time. His pulse was then 72, *weak, but regular;* his respiration 40, and laboured; lips livid; great anxiety of countenance. He complained of extreme pain in the cardiac region, increased by pressing the ribs towards the heart, or by making deep pressure in the epigastrium, so as to push upwards against the diaphragm. The stethoscope detected a remarkably loud frottement all over the præcordial region, accompanied by a strong frémissement. The frottement was heard with both sounds; and in some situations, particularly towards the right nipple, it had the character of the bruit de cuir neuf; there was no bruit de soufflet; impulse violent, and sounds of heart loud; no dulness; *the morbid sounds did not extend beyond the cardiac region.*

There was scarcely any change till two days after, when, in addition to the pericarditis, he was attacked with acute pain in the right hypochondrium, with excessive tenderness on pressure.

The next day the legs and belly began to swell, and new phenomena were observed in the neighbourhood of the heart. The friction sound, which two days before was very loud, corresponding to the apex of the heart, was now completely absent, and though the cardiac region sounded clear, yet immediately above the nipple, and for two inches and a half upwards, *there was complete dulness,* and all over this dull region we heard the *friction* as loud as ever, and that modification of it called *the* *leather creak*, which was still confined to the right side of the heart. It was found that these sounds were quite independent of the respiratory movements, for they went on interruptedly during the cessation of breathing.

Early next morning he died, and the post-mortem examination was exceedingly illustrative. The lungs and pleura were quite healthy. The heart occupied a situation higher in the thorax than usual; *its base corresponded to the space between the first and second ribs*, and was evidently pushed up to the left lobe of the liver, and the fluid so suddenly effused in the abdomen. On slitting up the pericardium, it was found thickened; the external layer was very vascular, and both it and the layer covering the heart were thickly coated with lymph. At the apex of the heart the two surfaces were closely united; but at the base there was no attempt at union. In this situation, but more particularly towards its sternal aspect, the lymph was thrown out in greater abundance, and presented a rough and nobbed appearance. The substance of the heart, as well as the valves and endocardium, was free from disease. The peritoneum was quite healthy, but its sac was distended with a large quantity of straw-coloured serum, without any lymph. The liver was greatly enlarged and engorged with blood, which exuded freely from the incision made into it. The intestines and stomach were quite normal. The kidneys exhibited the second stage of the albuminous nephritis (so called), and the urine in the bladder was albuminous.

Let me here draw your attention strongly to the fact, that although the impulse of the heart was violent, yet the sound produced by the roughened pericardiac surfaces against each other was very limited in extent, being only audible over the region immediately covering the heart; whereas, in Mulcahy's case, and that detailed by Dr. Watson, the pericardiac friction gave rise to a sound audible over even the most distant parts, and in them nearly as loud as in the cardiac region.

What can be the cause of a difference so striking? It cannot be accounted for by any corresponding difference in the nature of the lymph effused, and a consequent difference in the physical constitution of the rubbing surfaces; for no such difference could be perceived between the pericardiac pseudo-membranes in the case of Mulcahy and that of Reilly. In Dr. Watson's atient they are represented to have been somewhat of a horny ature, a fact which may be thought to explain the loudness nd extensive diffusion of the sound; but as such an explana- ion does not account for the great difference observed as to the xtent and diffusion of the pericarditic sounds in the two other atients, it becomes a matter of great interest to ascertain its eal cause; and, after much consideration of the subject, and uly weighing all the phenomena exhibited during life and vealed by dissection, I have little or no hesitation in affirming hat in Mulcahy the sounds were louder and more extensively udible: because, first, his heart was greatly hypertrophied and nlarged, and consequently the rubbing surfaces were actually reater in extent; secondly, as happens in all cases of consider- ble enlargement of the heart, the position of that organ within e chest is altered, and a much greater proportion of its body mes in contact with the chest; and, thirdly (but upon this I all not insist so much as upon the two preceding), because in ulcahy the water effused into the pleural cavity pressed the art still more closely against the sternum and ribs, which thus ted as conductors of the sound.

These cases are then peculiarly instructive, *as indicating a eat difference between the diffusion of the rubbing sounds heard pericarditis attacking a heart previously healthy and of natural mensions, and pericarditis supervening where the heart is larged and hypertrophied.*

Having spoken of rheumatic inflammation as affecting the bstance of the heart itself, I must observe that the existence rheumatic inflammation of the heart is rather inferred than oved. A little reflection will, at all events, convince us that eumatism, properly so called, affects certain systems of uscles much more frequently than others. The locomotive uscles are those most usually the seat of rheumatism; and en among them an inexplicable difference may be detected on close examination. Those employed in the motions of e head and neck, and those which perform the flexion of the mbar spine, being by far more frequently affected than any hers; on the other hand, all those muscles which are con- cted with organic life are comparatively exempt from muscular eumatism. Thus, the extensive system of the intestinal uscles are seldom, if ever, so affected; the vesical muscles are similarly circumstanced; and it may be doubted whether the muscles of the heart do not enjoy the same immunity.

The muscles of the heart, it is true, are often excited into inordinate action by rheumatic inflammation of their lining or covering membranes; but this very increase of action would be either impossible, or attended with excessive pain, if the muscular structure was attacked by rheumatism at all resembling that which we observe in lumbago or crick in the neck. Such an affection would render the heart's motions, particularly when increased, extremely painful; indeed, it would most probably arrest them altogether.

LECTURE XLVIII.

ERICARDITIS.—ORGANIC DISEASE OF THE HEART.—PERICARDIAL EFFUSION.

continuation of the observations which I was making at the onclusion of my last lecture on the signs and symptoms of periarditis, I shall first call your attention to the case of the man onnell, aged 50, who was admitted on the 10th of August. He tated that for eight years before admission he had suffered from alpitation and dyspnœa, which had increased greatly in severity f late; he had always led an intemperate life, and for many ears was in the habit of drinking from ten to twenty glasses of hisky in the day. When admitted, he was much emaciated, is belly was distended and his legs œdematous. He had cough ith purulent expectoration, no dyspnœa when at rest, and his ulse was 74, soft and regular; decubitus on the right side; no ain in any part of the chest or abdomen; no enlargement of gulars, but the tips of the ears and the lips were blue; no sible pulsation, thrill, or bruit de soufflet in any of the teries of the neck or upper extremity, and when at rest no ffering from palpitation.

Physical signs.—Chest sounded dull all over the right side, th before and behind; in the upper part the respiratory murur was weak and mixed with crepitus, below it was scarcely udible. The left side sounded clear, and the respiration was ud, puerile, and free from rale: there was slight increase of rdiac dulness, particularly towards the sternum; the impulse the heart was strong and rather diffused, its sounds loud: the rst was accompanied by a bruit de soufflet, audible all over the ardiac region, but remarkably intense to the left of the nipple. *his did not ascend along the course of the aorta,* nor was it ccompanied by any frémissement.

From his admission into the hospital till his death, which took lace five weeks after, there was not the least change in the ardiac signs. The physical phenomena did not undergo the slightest alteration; the pulse was always natural in frequency, and free from any intermission or irregularity; and, unless disturbed, his breathing appeared easy and tranquil. The anasarca increased, and the cough became more distressing; the crepitus heard on admission gradually passed into gurgling, and on the 20th of September he died.

Post-mortem.—The abdomen was greatly distended with fluid; the intestines were healthy; the liver was somewhat enlarged, and its edges rounded off, but otherwise natural; the gall-bladder contained a few calculi; *lungs* were connected to the parietes by old adhesions; the left was exceedingly healthy; the right was studded with tubercles, and its apex was occupied by small cavities; the *heart* was hypertrophied, and the pericardium universally adherent, the union being effected by a dense membrane. There was not the least trace of vascularity or of recently deposited lymph, but the pericardium was much thickened. *All the valves of the heart, the semilunar, tricuspid, and mitral, were perfectly healthy: the aorta was dilated at its ascending portion (not at its arch), its lining membrane completely removed, and its inner surface rough and scabrous from an abundant deposition of earthy matter in its middle coat.* The arch of the aorta and its descending portion were extremely healthy; and the normal condition of the aortic valves was put beyond question, by pouring water down the aorta, not a drop of which escaped into the ventricle.

In this case the permanency of the bruit de soufflet during many weeks, and its being constantly confined to the same place, left no doubt of its being owing to an organic fixed cause. This bruit, though heard over the right side of the heart, was more audible over the left, and therefore we looked for the cause in the left cavities, and we assumed that the mitral valves were the seat of disease, or altered in their structure. This diagnosis, however, I considered more tentative than certain, and I explained to you that I had not much confidence in it; for, though the bruit was loudest immediately over the situation of the mitral valve, yet, in the majority of cases, regurgitation through the left auriculo-ventricular opening is accompanied by a marked derangement of the pulse.

Against its depending on disease of the aortic valves, or of the inner surface of the aorta itself, I urged the fact that the bruit could not be heard along the course of the aorta, as recent writers say it invariably is in either of these cases. The absence of visible arterial pulsation and thrill was opposed to the supposition of permanent patency of the aortic valves. Dissection proved that the bruit was occasioned by a roughness of the internal aortic surface, embracing the whole of its ascending portion.

Here, then, is a fact totally at variance with received notions, and, in my opinion, quite subversive of the rules laid down by those pathologists who think they can always discover the cause of cardiac bruits by a close examination of the intensity and diffusion of the sound. I leave it to others to explain the fact, as certain as it is anomalous, that a loud bruit de soufflet, caused by extensive aortic roughness, had its maximum intensity over the region of the mitral valves, and could not be traced along the ascending aorta. How are we to distinguish such a case as this from disease of the mitral valves?

The following from Dr. Budd, in his Clinical Remarks at King's College Hospital, published in the *Medical Gazette* for January the 7th, 1842, exhibits symptoms, functional and physical, almost so perfectly identical with those detailed in the instance of Connell, that a candid observer, reading the history of both, must conclude that they necessarily depend upon exactly the same structural alterations:—

"A girl named Maria Pepler was admitted into the King's College Hospital on the 18th November, 1840. She was 25 years of age, and had been living in service. She stated that her health was very good until five years previously, when she became affected with dropsy of the legs, which went off at the end of six weeks. Since that time she had been subject to palpitation and shortness of breath, with occasional cough; and the dropsy had recurred whenever she had taken cold. On admission, she complained of palpitation, much increased by any exertion, and of occasional faintness. There was difficulty of breathing to such a degree, that she was unable to lie back; and a troublesome cough, attended with expectoration of a frothy mucilaginous fluid, and sometimes so prolonged as to bring on vomiting. The lips and cheeks were of purplish hue, and there was great distention of the jugulars. Much dropsical swelling of the lower extremities, but no œdema of the hands and face. A systolic bruit was heard over the præcordia, loudest at the point of the heart, *and to the left of the mamma.* At the point of the heart no diastolic sound could be heard. Towards the sternum and base of the heart the systolic bruit diminished very much in intensity, and the natural diastolic sound became inaudible. There was no morbid sound in the course of the aorta or carotids. Auscultation of the lungs indicated increased secretion from the bronchial tubes. On the 14th of December she died suddenly.

"*Post-mortem.*—The heart is of enormous size, placed transversely and quite uncovered by lung. The right ventricle is enormously dilated, and its parietes are thicker and firmer than those of the left ventricle. The apex of the heart is formed by the right ventricle, and descended lower than the left. The left ventricle is not dilated nor hypertrophied. Both auricles are greatly dilated, and were gorged with blood. The mitral valves are joined together, and perfectly rigid, forming a permanent aperture which scarcely admits the tip of the little finger. A good deal of bony matter is deposited under the investing membrane of the valves; but there are no vegetations on their surface. One or two extremely minute warty growths on the tricuspid valves. The aortic valves are, perhaps, a little thickened; but in other respects they are perfectly natural, as are also the pulmonary valves and the aorta."

Notwithstanding the boasted perfection of the means pointed out by recent writers, and which, they aver, always indicate with certainty the nature and locality of valvular diseases of the heart, it must be allowed that these means were totally inapplicable, as leading to a diagnosis between the cases of Connell and Pepler. We are led, therefore, to the humiliating confession, that in the present state of science excessive disease of the mitral valves cannot be always distinguished from aortic roughness.

In Connell's case we did not even suspect the existence of aortic roughness, because some of the physical symptoms believed to be most strongly indicative of that roughness were wanting, viz., vibration felt along the right edge of the sternum, and loudness and roughness of the systolic bruit heard there and over the arteries of the neck. The absence of these two so vaunted diagnostic symptoms, in a case where there were ossific plates on the inner surface of the ascending aorta, is scarcely more destructive of the presumptions of modern cardiac signs, than is e presence of the very same two symptoms in the following se, also related by Dr. Budd (*Medical Gazette*, December 24, 811), and in which they originated from diseased aortic valves. fter detailing the sufferings and post-mortem of the patient, hose name was Coyne, Dr. Budd sums up his remarks by aying, "When Coyne was admitted into the hospital it was evient, from the great extent of the dulness at the præcordia, that the heart was much enlarged, and from the powerful and heaving impulse that there was hypertrophy of the left ventricle. We inferred also, from the visible pulsation of the arteries, and from the diastolic bellows-sound heard about the base of the heart, that the aortic valves were diseased, and admitted regurgitation. The loud systolic bruit heard at the apex might also arise from such disease of the aortic valves. The strong vibration felt by the hand showed that there was some ossification.

"So far our predictions were realized. But we were led to imagine, from the strong vibration felt along the right edge of the sternum, from the third rib to the clavicle, and from the loudness and roughness of the systolic bruit heard there and over the arteries of the neck, that there were ossific plates on the inner surface of the ascending aorta. In this, however, we were mistaken; this portion of the artery was quite healthy.

"This case of Coyne shows us how perfectly a vibration, originating at the aortic valves, and causing a systolic bruit, may be propagated along the arteries."

In the next case there were bruit de soufflet and frémissement all over the chest, both before and behind, and in the arteries of the neck, &c., without any evidence of pericarditis or valvular disease; it is that of the remarkably fine girl, about 10 years old, named Mary Robinson, who was admitted November 1st, for symptoms supposed to depend on hydrocephalus. For this disease she was treated in the usual way, and appeared to improve gradually. Four days after admission the following note was taken: lies half asleep; occasionally crying out from pain in the head; her face is pale; lips puffed and pale; head drawn back; muscles of the neck rigid; there is no appearance of abscess or tumor in any part of the neck or œdema. The head is hot, but the pupils are quite natural; there is a very remarkable pulsation in both carotids, attended with loud bruit de soufflet and thrill; the action of the heart is violent, its sounds loud, and with the first is heard a very loud bruit de soufflet, which is not confined to the cardiac region, but is heard all over the chest, *both before and behind*, and in every situation there is a strong frémissement. There is no bruit in the abdominal aorta; she has no dyspnœa, palpitation, or cough; no pain on pressing over the heart, or pushing up the diaphragm against the apex of the organ. Pulse 100, pretty strong and full; digestive functions natural; skin hot.

She remained in the hospital for ten or twelve days after the above note was taken; the bruit and thrill gradually became less distinct, but at the time of her departure they had not entirely disappeared.

Now, in this case, a most remarkable feature was the intense frémissement, or *thrilling vibratory motion*, perceptible by the hand on whatever part of the chest it was placed. This thrilling motion appeared nearly equable throughout all the pectoral regions, and was synchronous with the systolic motions of the heart, and a loud bruit de soufflet, which, likewise, was equally audible all over the chest. The phenomena in this case were, in my opinion, totally unconnected with pericarditis or valvular disease, and the result showed that opinion to be correct, for the physical phenomena disappeared under the use of nervous medicines and nutritious diet.

It becomes interesting to determine, first, how we are to distinguish such a case from pericarditis or valvular disease; and, secondly, how we are to account for the physical signs which this girl exhibited. With respect to the first question, it may be thought that a thrilling vibratory motion so intense, and a bruit de soufflet so loud, and both nearly equable all over the chest, could not be produced by pericarditis; but this is not correct, for I saw, along with Dr. Parkinson, a case in North Great Charles Street, where a bruit de soufflet as loud, and vibration as intense, were established all over the chest in the interval between our morning and evening visit, in a gentleman labouring under pericarditis. I regret that I took no note of this case at the time, and consequently cannot say whether the bruit de soufflet and thrill extended to the carotids. I regret this the more, because if they did not so extend, the diagnosis between such a case and that of our patient Robinson would be obvious. The absence of any dyspnœa or other irregularity of the respiratory function, made it evident that in Mary Robinson the thrill and bruit were unconnected with pericarditis, for pericarditis could not give rise to such phenomena except when most intense, and when thus intense it always produces functional derangement easily to be recognized.

With respect to the diagnosis between the phenomena observed in our patient and those which occur in valvular disease, it is sufficient to remark, that in the latter the thrill and bruit are never equally diffused over the whole back and front of the chest. Next with regard to the cause of these phenomena, it is to be held in mind that similar physical signs are produced by vibrations arising from the blood flowing through roughened arteries or diseased valves, a result sufficiently explicable by the ordinary principles of acoustics; and, secondly, that they may be caused by pericardial friction in pericarditis. Physiologists have applied themselves to the explanation of the thrill and bruit so often heard in hysterical, nervous, and exhausted patients; but I am not aware that these phenomena have, in such persons, been observed to extend beyond the vascular system, or have been mparted in all their intensity to the whole parietes of the chest.

I do not feel myself at present enabled to offer any solid easons for either supporting or opposing the opinion generally dvanced, concerning the cause of frémissement or bruit in the rteries of the nervous or debilitated; and I am equally at a loss o account for these phenomena, as observed in the thoracic arietes and arterial system of Mary Robinson, and my consciousess of the difficulty of offering any adequate explanation is ncreased by the fact, that they were entirely absent in the bdominal aorta and arteries of the lower extremities.

In contrast to the cases I have now been speaking of, I lay efore you the heart of a gentleman who had walked to my house o consult me fourteen days ago. It is an example of the great egree to which organic disease may proceed without exciting erious symptoms, or much alarm. The patient was about fiftyour years of age, and of active habits. He had never felt any nconvenience, nor any deviation from a state of general good ealth, until about six weeks ago, when happening to be ravelling in the country, he got out of his carriage to walk up a teep hill, and after walking some distance, found his breathing ecome so short and oppressed that he was obliged to stand a onsiderable time to recover himself. He recovered perfectly, and without any remaining trace of dyspnœa; but after some time it returned again, and he found that his breathing became short whenever he went up stairs or walked quickly on level ground. After each attack, however, he seemed to be quite well. About a month since he got influenza, accompanied by the usual symptoms of feverishness, bronchitis, and dyspnœa, but he did not think much of it—complained of very little inconvenience, and was not confined to his bed or room. When I first saw him, he said that he was labouring under a very severe cold. On examining his chest, the heart was found to pulsate violently, irregularly, and tumultuously; there was a corresponding state of the pulse, which was so irregular that it could not be said to intermit. A loud bruit de soufflet, accompanying the first sound, was audible over the whole cardiac region, and extending as high as the top of the sternum; he had also bronchitic cough, with paroxysms resembling those of asthma. His symptoms progressed with unusual rapidity: his breathing became more difficult, he had complete orthopnœa, became in the course of a few days quite dropsical, and died rather suddenly about a fortnight after.

On removing the heart, it had the shape of a heart in which there was disease of the aortic valves; and this was not only the case, but there was no other morbid change in the organ. Any one who examined the valves would find that they had been ossified to such an extent as not to allow the tip of the little finger to pass. With regard to diagnosis, I may remark, that I was not quite satisfied during life that the disease was in the valves of the aorta; indeed, I was rather inclined to look upon it as a different affection. The bruit de soufflet, it was true, was accompanied by a certain roughness in the sound which might be attributed to the friction of the blood over the roughened surface of the aorta, but owing to the loudness of the sound, and its diffusion over a large space, it was impossible to localize it so as to arrive at any certain conclusion. Where bruit de soufflet is very loud, and diffused over a considerable space, very little precise information can be derived from it, but when moderate, it gives us an opportunity of discovering the quarter from which it proceeds. Another remarkable circumstance connected with this case is, the consideration how it was possible that life could be maintained so long with an aortic opening so much diseased.

From the history of the case, it was probable that if this gentleman had not got influenza, he would have lived much longer. It shows that in many instances, where organic disease is forming, it may remain latent for a long time, until something occurs which interferes with the function of the part. The first thing which rendered this gentleman's disease perceptible was the exertion made in walking up a hill, and it was rendered still more obvious by the attack of influenza. It is this circumstance which gives to organic disease a character of periodicity; matters go on quietly until some cause produces functional disturbance, and then the mischief stands revealed. In this gentleman's ase it was remarkable, that even at an advanced state of the isease he had well-marked paroxysms of dyspnœa. The only ther points worthy of notice were the presence of bronchial nflammation and a carnified state of the lung, which of ourse were chiefly attributable to the obstinate state of the irculation.

Let me now call your attention to the termination of pericaritis in effusion, and to the symptoms thereby produced. The ollowing case was so accurately noted, and the morbid appearances ccounted so satisfactorily for the symptoms observed during life, hat I shall use it as the groundwork of my remarks.

Mary Kernan, aged 10, was admitted into hospital October he 6th, in a state of collapse, moaning, sighing, and evidently uffering great distress from difficulty of breathing; the pulse ould scarcely be detected; her extremities were cold, and onsiderable tenderness existed over the left side of the chest. arbonate of ammonia, with calomel, and dry cupping to the ainful parts were ordered; and being this morning more at ase and less in agony, she gives the following statements as he history of her illness.

Being placed in a draught of air, yesterday week whilst lying n bed, she was seized the following day with shiverings, vomitng, headache, pains in the loins, thighs, and legs, also a beating f the heart so strong as to make her imagine it would at ast "thump" through her side, continuing for two days with light intermissions in its violence; it was then accompanied by n acute, sharp, lancinating pain in the mammary region, xtending to the neck and back, being particularly severe between he shoulder blades and the left arm as far as the elbow, and aggravated by motion, full inspiration, or muscular efforts of any description. Added to these complaints, there were difficulty of lying on the left side, with shortness of breath, and a hacking, distressing cough, without expectoration; this, however, she had for many days previously, without any attendant pain or other untoward symptom.

From the chest the pain seemed to spread or dart forward to the right side of the abdomen, and from thence over every part of the belly, occasioning more uneasiness than when confined to its primitive seat. Prior to her admission, some purgative medicines were given with slight relief. For several nights past her sleep has been much disturbed, and she now lies on her right side, groaning frequently, and prostrated in strength, so as to be unable to raise herself in bed without assistance. She complains mostly of urgent thirst, a stuffing about the chest, and a "great weight or heavy load on the heart;" inability to lie on the left side, or sit up from an increase in the cough; pains in the mammary region, and palpitations of the heart; when pressure is made over this portion of the chest, much disquietude is produced.

Her countenance is bloated, œdematous, and pale; lips almost colourless; skin hot and dry; breathing rapid and laboured, 48 in the minute; pulse 120, small, feeble, varying in strength, and intermittent; tongue furred and clammy.

The left side of the chest to the eye appears fuller, of larger dimensions, and the muscles, as it were, puffed out; this is particularly obvious about the nipple; when measured, no inequality between the two sides can be discovered; percussion from an inch below the left clavicle to the lower part of the cardiac region, also laterally over a space of several inches, is perfectly dull; this is likewise observable over the middle and inferior parts of the sternum, and to the right of this bone, whilst posteriorly over both scapulæ as far as their spinous ridge and below these bones, it is preternaturally clear. Respiration is exceedingly feeble over the dull parts, but free from rale, and elsewhere very loud. Impulse of heart cannot be felt; its action feeble, sounds indistinct below the mamma, becoming more audible towards the sternum, but can be heard in the epigastrium. No bruit can be detected. Abdomen full, tense, and much pained by pressure over the hepatic region.

Applicentur hirudines sex regioni cordis et hypochondrio dextro.
Habeat Hydrargyri cum Cretâ grana quinque ter in die.

7th.—Leeches were applied to the hepatic region alone; she presses herself as somewhat relieved, and can now lie on the t side without being so much inconvenienced; slept better, l moaned comparatively little; pulse very irregular, is full and t at one time for eight or ten beats, then diminishing in ength, it increases in frequency to the rate of 120 to 130, dually vanishes from beneath the finger, and ceases to be felt; succeeding pulsations are full and distinct, not more than 88 90 in the minute. Respiration 48, still distressed; bowels ned twice; tongue loaded and moist. Percussion over the ts noted above remains the same; on the clavicles of each e it is quite natural. Immediately above the left clavicle there n evident fulness or swelling of the lower part of the neck, visible on the right side; *and on coughing a tumor is ught into view, which disappears as soon as the paroxysm sides.* Respiration in this part is perfectly distinct; a ezing rale is audible in the lower portion of the left side. rt's impulse and action the same; in the erect posture its nds can scarcely be detected, but on lying down they are toler- distinct.

Applicetur vesicatorium epigastrio, et repetantur
pulveres hydrargyri cum cretâ.

th.—Was very restless the entire night, moaning frequently coughing constantly. Her countenance is less swollen; her thing is more difficult; and she complains principally of the uffing and weight about the heart." Pulse remains of the e character, but is not so irregular.

o change has taken place in the phenomena either of the gs or heart, except that the fulness in the lower part of the k is more apparent, and the bronchitic rales more distinct in inferior and middle portions of each lung. Abdomen not so der, but still swollen; bowels purged.

eeches were again ordered, and a further attempt made to ng the system under the influence of mercury by inunction and vapour of a mercurial candle.

th.—Breath is slightly mercurial; appears less affected in her breathing; the respirations continue rapid, 40 in the minute; no alteration in the character of the pulse.

There are now intense cooing and hissing rales in each lung posteriorly, but otherwise no change has taken place in the percussion or respiration. The cough is very troublesome, and attended with a frothy tenacious expectoration; pains increased, and palpitations induced by lying on the left side.

Repetantur omnia ut heri præscripta, et applicetur vesicatorium hypochondrio dextro.

10th.—Prefers being in the erect posture, being more at ease, less oppressed, and in a great measure relieved of "the weight and load on her heart." Her countenance and aspect generally are improved, but her breathing remains frequent and laboured; *the pulse is regular,* 128 *in the minute; does not vary in strength, neither has an intermission occurred during so many beats.* She is at present sitting up in the bed, and whilst in this posture the pulse was counted.

Percussion over the inferior portions of each lung posteriorly, the left in particular, has lost its tympanitic sound, but retains it at the superior parts. Heart's impulse is still imperceptible; its sounds are indistinctly audible along the sternum.

Applicetur vesicatorium lateri sinistro et repetantur alia.

11th.—The pulse again varies in strength, intermits occasionally, and partakes of the description given on the 7th, is 120 in the minute, but she is now in the recumbent posture; passed the night, as heretofore, moaning and in a very restless manner; complains of the oppression about her heart being increased, and refers it to the lower part of the sternum and right side. There is considerable wheezing in the throat; on account of the blister no examination of the chest could be made; pressure over the abdomen produces pain; it is swollen and dull all over when percussed.

Applicetur vesicatorium regioni cordis et repetantur alia.

12th.—The phenomena remain as before, viz., fulness about the lower part of the left side of the neck, with pure and distinct respiration; healthy sound on percussion over each clavicle, with the natural vesicular murmur; one inch below this, better marked on the left side, extending over the middle and inferior parts of the sternum, anterior part of right side, and a portion of the lateral of the left, a perfectly dull sound is elicited by percussion; the respiration being almost null in the left, feeble but distinct in the right. A very clear sound on percussion in the superior parts posteriorly, with a mixture of bronchitic and crepitating rales in the inferior lobes, and loud respiration, free from rale, in the superior lobes. Heart's impulse and action the same. Pulse much weaker; respiration more frequent, 56 in the minute; breathing free; tongue loaded.

13th.—Pulse almost imperceptible; breathing more laboured and distressed; lips of a livid hue.—Died at 11 o'clock p.m.

Autopsy fourteen hours after death.—External appearance similar to that presented when alive; countenance puffed, pale, and œdematous; chest, *particularly left side, full and prominent,* and the abdomen distended and rounded. The same phenomena are afforded by percussion as noted in the reports during life. The integuments of the chest, as also those of the abdomen, are watery. As soon as the knife pierced the cartilages of the left ribs, a gush of straw-coloured fluid took place, and when the sternum was raised, nothing but the pericardium could be seen; to such an extent was it distended, as to occupy the mesial line extending from the diaphragm to within one inch of the fourchette of the sternum, and across to the right side. On removing it from the cavity of the thorax, the lung was found much diminished in size, pushed upwards, and pressed against the spine and ribs, having lost a great deal of its natural feel, and appearing like a lung compressed by a pleuritic effusion. The right lung was also affected in the same manner, but in a minor degree. Slight adhesions of recent formation existed between the left lung and pericardial sac, as also between the pulmonary and costal pleura, at the superior lobe of the right lung.

The pericardium itself is increased to at least three times its natural capacity; its exterior highly vascular, whilst its internal surface appears smooth, shining, and covered with a gelatinous kind of fluid resembling the mucous coat of the stomach, or other portions of the intestinal canal. Its thickness is from three to five lines; but on inspecting the cut surfaces minutely, it is evident this increase is produced by the addition of a false membrane. On the superfices of this membrane are several patches of apparently coagulated lymph, stained of a purple or dark-red colour, differing considerably in their dimensions, and situated in particular near the base of the heart, and that part of the sac in connexion with the posterior surface of this viscus; the larger of these, however, of an oblong shape, about two inches in length, and of a darker colour than the rest, is situated where the anterior part of the heart and pericardium are in contact. Besides these are innumerable depressions, or pittings, capable of admitting the end of a probe on the lower and anterior part of this membrane, whilst near the base of the heart and the posterior part of its investing sac, this coating is separated into distinct patches, the serous covering of the pericardium being quite apparent underneath, and presenting its natural glistening appearance.

This false membrane can, with the greatest facility, be scraped off in solid pieces by the nail.

The entire surface of the heart is of a vermilion colour, and coated over with a most beautiful, honeycomb, reticular kind of organized lymph, exceedingly fine, but perfectly adherent to the layer of serous membrane covering the heart at the apex.

Advancing upwards or nearer to the base, it is more condensed and compact, seemingly farther progressed in the process of organization, the shreds and interlacing fibres being increased in bulk.

From the quantity of this crimson-coloured network, at the commencement of the aorta and pulmonary artery, it is almost impossible to distinguish between them, so closely are they united together. The under surface of the auricular appendices, and that part of the heart they rest on, are the only portions which do not present to the same degree, and in a slight manner merely, the general aspect described.

Covered in this manner, and to such an extent as the anterior surface is, the posterior is trebly more so, and with a form of lymph more organized, denser, and firmer; and from its exterior are three or four appendages, tough, closely adherent to and evidently taking their origin from the surface of the coagulable lymph.

On the removal of a portion of this coating, the substance of the heart beneath presents a rosaceous hue; its size does not appear to be much altered, perhaps rather larger than natural.

xamination of the interior. A quantity of the same coloured escaped from the cavity of the abdomen on laying open its tes; the liver did not appear increased in size, and its struc- was perfectly healthy; bands of lymph passed between and ected together the visceral and parietal peritoneum, few and t, and not connecting together the intestines themselves. interior of the intestinal canal was not examined.

w in this case the following points are particularly worthy ur notice :—

t. The great size of the tumor formed by the distended ardium.

dly. The protrusion of the left lung to a considerable extent the clavicle, forming the tumefaction observed in that tion.

lly. The tympanitic sound produced by the close application e lung to certain parts of the *tense* pectoral parietes.

ly. The varying states of the pulse, at one time intermitting rregular, at another free from these characters.

ly. When this girl was admitted, copious effusion into the ardium had already taken place, and yet her countenance pale, and her lips colourless; there was no suffusion, no ty, no venous turgescence whatever in the eyes, face, or and yet her breathing was 48, and the pulse feeble, varying rength, and intermittent.

ly. Although it is said in the report that the left half of the did not measure more than the right, yet there was an nt dilatation of the former, exactly corresponding to the dis- d pericardium, which, pushing before it the flexible parietes, ed a well-marked and evident prominence. This likewise red the parietes of the superior portions of the left side of hest more tense than natural; an occurrence sure, for ns well explained by Dr. Williams, to occasion increased ance on percussion. *I am not aware that this consequence ricarditis had been described* until I noticed it.

fore concluding, I wish to call your attention to a very rkable, I might almost say unique case, in which there only two valves to the pulmonary artery, and those valves n inflamed condition; there was also in this same case ion into the pericardium, and pneumonia. It is that of n named Bennett, aged 66, who was admitted into hospital, November 18th, labouring under pneumonia. There was complete absence of fever; he had cough with prune-juice expectoration; and the physical signs which the case presented were intense dulness over the right lung behind, extending from the spine of scapula downwards, bronchial respiration, with some crepitus towards the end of each inspiration.

He was cupped and got tartar emetic in small doses, which was discontinued in consequence of its producing purging. Blisters were applied, but the physical signs remained almost stationary, particularly towards the centre of the lung. His tongue became dry and red, and he suffered from thirst; but in other respects he appeared steadily improving. After the purging ceased, he was ordered various narcotics, and a seton was inserted opposite to where the disease appeared to be most intense.

On the morning of December 1st, we found him as usual at the clinical visit. The issue was discharging, and everything apparently going on well; the next morning we were not a little surprised to find him moribund. Of course, in this state, no examination was made, and in about three hours after our departure he died.

Post-mortem.—The left lung was in every way healthy, except that it presented a few parts in an emphysematous state; the upper part of the right was also healthy, but the lower two-thirds, particularly at the back part, presented the usual appearance of solidification; they felt solid, were extremely friable, and did not crepitate. There was no abscess nor any purulent infiltration. The pleura was thickened, and was united to that lining the ribs.

The pericardium was distended with a straw-coloured fluid so abundant that we expected to find pericarditis. The membrane was, however, in every way healthy. The heart was very soft, and lay collapsed; its structure was pale, but otherwise normal. On slitting up the pulmonary artery, it was found occupied by a fibrinous clot, which presented the usual division produced by the branches of that vessel. There are only *two valves*, and they were both coated with a recent deposition of lymph, in some situations almost a quarter of an inch thick. A small part of this lymph was accidentally removed while examining the valves, and the latter were seen much thickened and opaque, in this respect contrasting, in a very remarkable manner, with the valves of the aorta, which were quite free from disease. The lining membrane, both of the pulmonary artery and the aorta, presented its usual appearance, as did also the endocardium. There was some calcareous deposit on the tricuspid and mitral valves, but not to an extent beyond what is frequently observed in subjects of the same age. There was no anasarca nor effusion into the chest or abdomen.

This case is one of extreme interest in three points of view: viz., first, the irregularity in the number of the pulmonary valves; second, the disease of these valves; third, the hydropericardium.

It is exceedingly rare, indeed, to find the valves either of the aorta or of the pulmonary artery irregular, *but when such irregularities do take place, the valves are increased in number.* There are in the Museum of the College of Surgeons in Ireland two specimens, one exhibiting the aorta, and the other the pulmonary artery, each with four valves; and one case is given by Malcarne, where the aorta divided soon after its origin, and in which five valves were found. The present is, as far as I can ascertain, the only specimen in which this particular irregularity has been observed; and it is remarkable that it should be united with an affection almost equally rare, viz., acute inflammation of these valves producing thickening and effusion of lymph.

The presence of a large quantity of fluid in the pericardium, *unaccompanied by inflammation of that membrane, or effusion into any other part,* combined with the two remarkable appearances already mentioned, renders the case highly interesting. The specimen is now in the Museum of the School of Medicine, Park Street.

The sudden death was produced, no doubt, by the obstruction presented to the course of the blood from the heart into the lungs, added to the already existing extensive solidification of the right lung.

LECTURE XLIX.

FUNCTIONAL DISEASE OF THE HEART.—THORACIC ANEURISM.—PALPITATION OF THE HEART, AND ENLARGED THYROID GLAND.

I SHALL commence to-day's lecture with some observations on functional disease of the heart, and by a reference to some cases that have occurred in my practice, prove to you the difficulty which indeed nearly always exists in diagnosing functional from organic disease of that organ, and also show that death may be caused by simple functional affection without the presence of any organic change.

The first case I shall refer to is that of a gentleman who lived in Fitzwilliam Square, whom I saw with Mr. Carroll. He was 65 years of age, with every appearance of a healthy constitution, of regular habits and exceedingly temperate. In January, 1839, he was suddenly attacked with a dull pain in the region of the stomach, which he attributed to indigestion; shortly afterwards he vomited, his pulse became feeble and fluttering, his breathing panting and laborious, and his extremities deadly cold. This state continued for about three hours, notwithstanding the use of the most active stimulants, both internal and external. After recovering from this state he slept well that night, and next morning complained only of a feeling of languor.

He continued in his usual health for about ten days, when he was again attacked in a similar manner, but the fit did not last so long. The attacks from this time until his death, which did not occur for twelve months, increased in frequency, but each lasted for a shorter period than the preceding one. Let me describe a little more particularly to you the character of those attacks, some of which I witnessed. He was warned of the approach of each by a feeling of faintness and pain in the stomach, when he used to cry out, "Oh, it is coming on." This was followed by straining to vomit and panting, with a feeling of want of air, so much so as to make him wish to have the windows opened. There was no wheezing or cough, and the face was natural in colour but sunk. The pulse could not be felt at the wrist, and the heart's action was scarcely perceivable: in each fit he thought he should die. The attacks varied in length from half an hour to two hours, or even more.

In the intervals the pulse was perfectly regular, and there was no abnormal sound of the heart to be heard. Ascending a height or going up stairs gave rise to a feeling of dread, but did not cause dyspnœa or palpitation. There was no dropsical effusion at any stage of his illness. This gentleman was seen at different periods by some of the most eminent medical men in Dublin, and his disease was believed to have been either water on the chest or organic disease of the heart; but on examination after death that viscus was found to be, in every respect, perfectly healthy.

This case I look upon as an example of purely functional disease of the heart; such an affection is sometimes hereditary; at least it appears to have been so in this gentleman's family, for three of five children that he had have been similarly affected. His eldest son had two attacks at an interval of twelve months, but he has not had any return of them, although more than a year has now elapsed since the last; and two of his daughters have each had similar attacks, but slighter.

The next case I shall relate you is that of a lady aged 40, of an active, healthy constitution, whom I also saw with Mr. Carroll. While in London, being exposed to great fatigue from walking during a very hot summer, she was attacked with faintness and violent palpitation, which lasted about an hour. She had no return of the attack for about twelve months, when she was again similarly affected. The fits of palpitation, at first distant, became more frequent, and finally proved fatal in about nine months after the occurrence of the second. At first the pulse was irregular during the fits only, being natural in the intervals, but towards the conclusion of the disease this irregularity of pulse and of the heart was perpetual. In this case the most careful examination after death could not detect the least trace of organic disease of the heart.

The following case differs much, both in its character and symptoms, from those I have now related; nevertheless, I look upon it also as one of purely functional disease. It is that of a lady aged 46, who has been under my care from the time she was first attacked, now two years and eight months ago. Her illness commenced with rheumatism of the left arm, and pain darting from the centre of the sternum to the back and down the left arm, but without the least dyspnœa or fainting; also brow-ache very violent. For ten or fifteen years she felt occasional intermission of pulse, but after October, 1846, this became very troublesome and annoying—she being conscious of stoppage of the heart's action at each intermission; this consciousness being accompanied by a very unpleasant feeling, as if something scattered from the heart all through her chest, and occasionally this feeling induced a tendency to faint. At first the intermissions did not occur in more than monthly paroxysms, each paroxysm lasting three or four days, and only annoying her for a few hours in the morning; during these hours the intermissions were very frequent, every second and fifth beat, and two or three often together; this corresponded to intermission of the heart's action, as heard and felt; paroxysms after a time become more frequent—every fortnight—but still with intervals quite free; latterly the intermissions continued all through the day, but still worse in the morning. She experiences some slight dyspnœa after going up stairs; but there is no *physical sign of organic disease.* Her health is otherwise perfect; *no dropsy* nor lividity of the face. Her father had for many years intermitting pulse, but lived to a good old age.

This form of functional derangement of the heart's action is often produced by various causes, but by none so frequently as by the habit of smoking or taking snuff to excess. It is well for you to bear this in mind, as it may aid you to diagnose between it and organic disease.

In continuation of the subject which we have been now engaged with—diseases of the heart—let me next direct your attention to the case of the man named James Byrne, who lies next the door in the chronic ward, and has been supposed to labour under aneurism of the thoracic aorta; he leaves the hospital to-day. It is very probable, however, that he will hereafter be forced to return; for, whatever be the nature of his disease, it is incurable, and depends on some profound organic lesion. I would advise any gentleman who has not attended to this very obscure case before, to take the opportunity of making an accurate examination of the patient during the short time he remains in the hospital.

While the phenomena of this case are still fresh in our minds, let us briefly discuss the question, whether this man really has aneurism of the thoracic aorta, and inquire whether there may not be some other cause to which his symptoms might be attributed with a more reasonable degree of probability. He was admitted on the 23rd of October, 1834, and had been in the hospital before for a considerable time. He states that, eighteen months previously to his last admission, he was exposed to wet and cold, which produced a feverish attack, with symptoms of local inflammation in the lung, manifested by cough and difficulty of breathing. These were soon afterwards followed by dropsical swelling, and he applied at this hospital for relief. After emaining under treatment for about two months he began to mprove, and left the hospital, as he states, quite relieved. He njoyed tolerably good health, and continued to work at his trade s a bricklayer until about five weeks before his last admission, hen he was again attacked with cough and difficulty of breathing, companied by œdema of the left side of the chest and left arm. On examining him after his admission, the following phenomena ere observed :—The left side of the face and neck was slightly dematous ; the left external jugular vein, with its immediate ranches, engorged and very prominent ; the left arm and left de of the chest œdematous, and pitting on pressure : no affecon of the bronchial mucous membrane or parenchyma of the ngs, sufficient to account for the cough, can be detected by uscultation. Considerable dulness over the situation of the eart, and extending upwards over the sternal region on the left ide ; the right sternal region sounds clear and natural. The eart has not been removed from its normal situation ; its ulsations can be felt over the ordinary extent, and no more, and ey communicate a natural impulse to the finger. On applying e stethoscope over the heart, its sounds were found to be gular and natural ; but on placing it higher up, over that part f the sternal region which was dull on percussion, a loud bruit e râpe was heard.

Let us analyse these symptoms. In the first place, we found e anasarcous swelling occupying the left side of the chest and the rresponding arm, and in a slight degree the left side of the neck nd face, accompanied by a turgid state of the jugular vein. Now ou may lay it down as a general rule, that where one side of the chest and the corresponding upper extremity is affected by anasarca, it proceeds from some cause residing in the chest. In all cases of dropsy, whether acute or chronic—whether accompanied by ascites or not—*when anasarcous swelling appears in the trunk and upper extremities before it is observed in the abdomen or lower extremities, the dropsy in general is inflammatory, or, when not so and chronic, it proceeds from disease of some of the thoracic viscera,* and it is in the chest alone that we are to look for its cause and origin.

Now, applying this rule to the present case, we are led to inquire what it is that, by pressing on the veins within the chest, gives rise to engorgement of the superficial vessels on the left side of the neck, and to anasarcous swelling of the left arm and left side of the chest. The pressure must, in our patient, be applied to a portion of the venous system which carries blood from the left side of the head and the left upper extremity; in short, it must be applied to the great vein formed by the junction of the left subclavian and left jugulars. Now, this left vena innominata differs considerably from its fellow on the right side, which is very short, and nearly vertical in direction. The vein on the left side is three times longer, and directed transversely to the right, inclining at the same time downwards. It crosses behind the first bone of the sternum, lying in front of the three primary branches given off from the transverse portion of the arch of the aorta. You perceive, therefore, that it lies in a position most convenient to receive pressure in consequence of aneurism in any of these great vessels. This vein receives, before joining the cava, the internal mammary vein of the left side; you understand now, why anything pressing on it is apt to produce engorgement of the superficial veins on the left side of the chest and trunk, together with œdema of these parts.

That we are not to look for the cause of the disease in the heart itself appears from various circumstances. The situation of that organ is not changed; its beating can be felt only over the usual extent of surface; it communicates a natural impulse to the finger, and when examined with the stethoscope its sounds are discovered to be normal and regular. Neither can we attribute the disease to any affection of the mucous lining or parenchyma of the lung; the only morbid sounds which can be detected in the respiratory organs being a few slight bronchial rales.

Now it is sufficiently obvious that the situation of the part
ich sounds dull on percussion would suggest the idea of
eurismal dilatation of the arch of the aorta, or some of its
mediate branches. But had dulness over so large a space of
e chest, embracing nearly the whole left sternal region, been
oduced by aneurism of the aorta, or any of its branches, it is
ident that the aneurismal sac must be very large. When an
eurism gives rise to extensive dulness of the chest, you may
e always certain that it has arrived at a very considerable size;
r the dulness is caused by the immediate contiguity of the
eurismal sac to the parietes of the chest, and hence the dulness
always in proportion to the amount of lung displaced.

When you applied your hand over the sac, in such a case as
at which we are now considering, where the aneurism was of
rge size and closely applied to the parietes of the thorax, you
ould feel a very remarkable pulsation; your hand would be, as it
ere, lifted from the chest by each impulse communicated to the
c, and you would have palpable, unequivocal evidence of the
use of the dulness on percussion. Now, in the case before us,
ere was no such pulsation observed—whether we examined him
hile lying quietly in bed, or after he had walked briskly about
r some time so as to excite the action of the heart and arterial
stem. Again, aneurismal sacs, as you are all aware, before
ey produce extensive dulness of any portion of the parietes of
e chest, point, as it were, in some particular situation, becom-
g distinctly prominent, and producing an eccentric motion
ound them, in consequence of the thoracic parietes being
bsorbed, or yielding at the point of greatest pressure.

From these circumstances, considerable doubts have arisen in
y mind as to the cause of this man's symptoms being connected
ith aneurismal disease of the great vessels of the thorax. I am
ther inclined to attribute the bruit de râpe, and dulness of
und on percussion, to a lesion of a different character. Let us
ppose that in this case a tumor has been developed in the
eolar or glandular substances, situated in or towards the left
de of the chest, occupying the anterior mediastinum, pushing
ck the lung, and pressing on the large vessels connected with
e base of the heart; what are the phenomena it would naturally
esent? First, we should have dulness of sound on percussion,
rresponding in extent with that portion of the chest to which the

tumor applied; secondly, we should have bruit de soufflet, and probably bruit de râpe, in consequence of the pressure of the tumor on the aorta; thirdly, a tumor in this situation would necessarily compress some of the larger bronchial tubes, and thus give rise to cough and dyspnœa.

If a tumor presses on the trachea, or one of the larger bronchial tubes, why does it produce pulmonary irritation? Not by mere pressure on the part—for the pressure is applied so gradually, and with such a broad surface, that its effects could be scarcely felt; and it might go on to produce complete obliteration of the tube without giving rise to any inflammation, if its action were limited exclusively to the part compressed. *But it strangles, as it were, that portion of the lung to which the tube belongs;* a certain portion of a large bronchial tube is considerably narrowed by the pressure of the tumor, the free entrance and exit of air are impeded, and consequently that portion of the lung, which may be very large, is greatly deranged in its functions. Hence arises that sensation of distress termed dyspnœa.

Again, as soon as the free ingress and egress of air are prevented, we have not only the occurrence of dyspnœa, but also other effects equally referable to the same cause; the blood circulating through that part of the pulmonary tissue is imperfectly aërated, and does not undergo the necessary change; the secretions and exhalations from that part are altered and unnatural, and consequently it becomes engorged, giving rise to irritation, cough, and expectoration. To understand this aright, you should bear in mind that this portion of the lung undergoes the same changes that the whole of the lung undergoes in persons who are asphyxiated; that is, it becomes gorged with blood —for the moment that the black venous blood, which is carried into the pulmonary tissue from the right side of the heart, ceases to be properly aërated, that moment it stagnates in the lung, and soon renders it engorged. This is precisely the state of lungs which occurs in the posterior portions of these organs in persons who die a lingering death, and which has most absurdly been termed the pneumonia of the dying.

But to return to this man's case: I am inclined to think that the symptoms here present may with more colour of probability be attributed to the presence of a solid tumor developed in the chest, the nature of which I can only guess at, and that it is situated in the anterior mediastinum, close to the origin of the aorta. Some of these tumors which have been discovered in the chest are of an adipose nature; some of them resemble the cerebral substance in colour and consistence, and others are like the steatomatous tumors formed in other parts of the body.

A few months ago Surgeon Blackley was consulted about a young gentleman who had been gradually attacked with symptoms of pulmonary irritation, cough, and difficulty of breathing. The disease was supposed by some to be consumption, and a physician who had been in attendance thought it depended chiefly on derangement of the stomach. Mr. Blackley had his doubts with respect to both of these opinions, and requested of me to visit and examine the patient. I could not detect any râles indicating the existence of tubercles, but over a large portion of the chest, and nearly corresponding with that part which sounds morbidly in the patient Byrne, there was dulness on percussion; the young gentleman had fits of cough and dyspnœa, and now and then difficulty of swallowing; a bruit de soufflet could be heard over the dull portion of the chest, but the sounds and impulse of the heart were regular and natural.

I expressed a very doubtful opinion of the case, but at the same time stated my belief that the case was not one of tubercular phthisis, of empyema, or of pneumonia; and I also said that it did not seem to be produced by disease of the heart itself. I dwelt especially on the existence of bruit de soufflet in the region which was dull on percussion, and which was somewhat removed from the heart, and which, from its situation, I interpreted as indicating something pressing either the arch of the aorta, or some of its branches. I was not able to detect pulsation or any other symptom of aneurism, and consequently professed myself unable to say what that something was.

The result proved that although the true cause of the disease did not occur to me, I had, nevertheless, approached the discovery as nearly as could be done without actually making it; for, soon after this, the young gentleman died, and on opening the chest a large tumor of a steatomatous character was discovered pressing on the divisions of the trachea, of the aorta, and on the œsophagus. Another case of the same kind was published some time ago in the *Dublin Medical Journal.* We are, I believe, still in the infancy of diagnosis, so far as regards tumors developed in the chest, producing anomalous symptoms, and giving rise to suspicions of aneurismal or tubercular disease. With respect to the patient Byrne, I am inclined to think that the morbid phenomena are referable to a tumor of this description, and I ground my diagnosis chiefly on the absence of pulsation, which should be distinctly present if the dulness on percussion, here observed, depended on the proximity of an aneurismal sac to the parietes of the thorax.

As I am speaking of pulsation, permit me to observe that, in some cases where there is no actual disease present, the pulsations of the heart are visible over a very large extent of surface, so as to convey the impression that aneurismal dilatation exists. Of this I have lately seen a very remarkable example. In a case which I saw with Mr. Cusack, the patient's heart could be observed beating violently over the whole chest, and Mr. Cusack, when he laid his hand on the patient's chest, said he could not divest himself of the idea that there was some unnatural condition of the heart and great vessels.

Now, the violence of the heart's action in this case depended on disease of the brain. In some inflammatory or congestive diseases of the brain with a tendency to coma the heart labours intensely; its pulsations are quite awful, and it seems as if it were about to burst through the parietes of the chest. Again, this extraordinary action of the heart occurring in cerebral disease is almost invariably accompanied by a hard bounding pulse. I mention these circumstances for the purpose of putting you on your guard, and that you should not in such cases allow yourselves to be deceived, and suppose that the symptoms are to be met in every instance by copious blood-letting. Some cases of this description will bear depletion well, others will not. You know it was a maxim of Laennec's, that in bleeding we are to be guided more by the strength of the heart's action than by that of the pulse. I have already shown that this test does not always hold good.

You recollect the patient that was under treatment here some time ago, with violent action of the heart and a hard bounding pulse. This patient, a strong, healthy man, had just disembarked after a rough passage from Liverpool, during which he vomited much, and suffered intensely from headache, which he ascribed to the violence of retching. Walking along the quay, he was suddenly attacked with hemiplegia, and was immediately brought into the hospital, where he was bled and purged. Next day we found him still hemiplegic, and complaining of violent pain in the head. Active antiphlogistic treatment was used; but on the third day he became comatose, and was convulsed in the limbs of the healthy side. His face was flushed, his temporal arteries were dilated and pulsated violently, and his pulse was hard, while the heart pulsated with great strength. This attack came on during our visit, and I ordered a vein to be opened immediately. The blood flowed freely. When about fourteen ounces were taken, the pulse suddenly flagged and grew extremely weak, and never again rose. He died in about two hours, and an ignorant person would have ascribed his death to the bleeding. On examination, sixteen hours after death, we found extensive puriform effusion on the surface of the brain, together with a arge clot of blood and surrounding ramollissement.

This was a very remarkable case, and conveyed a very important sson, teaching us not to be too much led away by the violence the heart's action; for I have no doubt that here the use of e lancet shortened the man's life. Had such a case as this curred to any of you in private practice, it would be almost fatal your reputation. Here we have a patient with his face flushed, s skin hot, his temporal arteries throbbing violently, and his lse feeling like a piece of whipcord; he is blooded, and up to a rtain point the pulse remains firm; he then begins to sink pidly, and expires in two or three hours. Bear in mind, then, at a state of the system may exist in which the heart's action intense, and the pulse hard and bounding, and yet where leeding to any amount will be badly borne.

Such cases are generally connected with inflammation of the rain, accompanied by a tendency to coma. Here you must bleed ith great caution, let the quantity you take away be moderate, nd rather rely upon large relays of leeches and strong purgatives r removing the cerebral symptoms. You may afterwards ndeavour to moderate the heart's action by the use of digitalis nd opium; a grain of the former, and one-twelfth of a grain of e latter, made into a pill with some extract of hops, may be iven every second hour, until it begins to produce some effect on e heart's action, when it may be either discontinued or given t long intervals, as the circumstances of the case may require.

When, after bleeding and other antiphlogistic measures, the pulse continues high, and the action of the heart violent, I can recommend digitalis very strongly, and the small portion of opium here combined with it can do no harm. Combined in small quantities with digitalis, opium does not produce any tendency to determination to the head, and it prevents the digitalis from sickening the stomach. I have frequently employed it, and found great benefit from its exhibition. I may observe, that when you are anxious to secure the full sedative effects of digitalis on the heart and pulse, you must give it in large doses. In small quantities it does not act well, and seems rather to produce a tendency to excitement of the heart.

Let me next call your attention to a specimen of incipient aneurism of the aorta found in a woman who died of chronic pleuritis. The patient was about 30 years of age, of a delicate constitution, and worn out by various diseases. She had been ill two months before her admission, and remained in hospital for three months. A specimen of this kind is interesting both in a pathological and diagnostic point of view. The aneurismal tumor did not exceed the size of half a filbert, but on examining the inner surface of the artery, it was found that a considerable portion of the internal and middle coats had been removed by absorption, and that the external tunic, having to bear all the stress, was beginning to yield. It is not often that an aneurism of this kind is discovered; we have in it as it were the embryo of an aneurism furnishing a most interesting subject for study. As the disease of the chest in this woman was somewhat difficult of diagnosis, I made daily examinations with the stethoscope, but had never been able to detect bruit de soufflet or any other sign connected with aneurism of the aorta.

The history of the woman's case was this. She had complained of pain and difficulty of breathing for two months before she came to hospital. On admission, she was examined with the stethoscope, and pleuritic effusion of the left side discovered. The question then was whether paracentesis was advisable. The woman was greatly emaciated, and seemed quite exhausted by hectic and night perspirations; she spit up large quantities of pus mixed with blood, and shortly after admission was attacked with severe diarrhœa. Under these circumstances, I thought it necessary to advise an operation, particularly as for some time

as under the impression that she laboured under phthisis.
sequently, on examination, I found there was no phthisis
sent, but as the matter seemed to point externally, I thought
per to defer the operation. A large tumor formed over the
ion of the heart, which looked and felt like an aneurismal
nor in consequence of the impulse communicated to it by the
lsations of the heart. The tumor broke at last, and the mat-
was discharged externally with some relief, but the woman
s too much exhausted to hope for recovery. She lived,
vever, fifty-one days after the bursting of the pleuritic abscess.
u see here the left lung which adhered to the costal pleura.
loes not, however, exhibit anything like an extensive effusion
lymph on its surface, which is the more remarkable as the
nan had laboured under pleuritis for five months, and had
n for nearly two months with a fistulous opening in her side,
which the external air had constant communication with the
ty of the pleura. There is no opening into the lung itself,
it does not present anything remarkable except some indura-
of the posterior part of the inferior and middle lobes. A
rkable circumstance connected with the history of this case
hat when the natural opening took place, and the pleuritic
ion was discharged externally, the secretion of purulent mat-
rom the bronchial membrane, which had been most copious
ng the whole course of the disease, began to diminish
lly, and had nearly ceased for some weeks before her death.
same thing took place with respect to the bowel complaint.
as also remarkable that the expectoration, which had been
mely fœtid up to the period of the bursting of the pleuritic
ess, soon afterwards lost its fœtor, and became natural in smell
appearance.

though digitalis acts with very great efficacy in many cases
ver-action of the heart, the discovery of another remedy,
from the ill effects it occasionally produces, is a great
leratum, and I was therefore much pleased to find that in
first volume of the *Dublin Medical Journal* Mr. Newton
ribed a case in which the hydrosulphate of ammonia ap-
ed to exert a very powerful influence upon the action of the
t. It was used at the recommendation of Sir Henry Marsh,
it is stated, has found that in all the cases in which it

was exhibited, it had "produced a powerful effect in lowering the pulse."

In another part of the same paper, the hydrosulphate of ammonia is by implication preferred to digitalis, which is thus spoken of: "Many objections apply to the treatment by digitalis; it is always a dangerous and often an uncertain remedy, and in even those cases in which it succeeds best, it soon loses its efficacy; its tendency to disorder the stomach is often such as to forbid its employment; it was, therefore, a great desideratum in medicine to devise some plan of treatment which would lower the circulating system without producing permanent debility."

I have long felt strongly, as I said, the existence of the desideratum here spoken of, but have never entertained any very sanguine expectations of a remedy being discovered which would lower the circulation without producing debility. I therefore hastened, as you know, to exhibit the hydrosulphate of ammonia to many of the patients in the Meath Hospital. Some of these patients laboured under hypertrophy, with increased action of the heart; in others the heart's action was natural, and in some no disease existed except a cutaneous eruption. The remedy was given in doses gradually increased to twenty-five or thirty drops four times a-day, largely diluted, as recommended by Sir Henry Marsh. *In no one instance did it exert the slightest effect upon the heart's action or the pulse.* After it had failed in a few instances, I caused a new supply of the medicine to be procured, and the doses were administered by the apothecary of the hospital, in order to insure its being taken as directed.

I have lately seen three cases of violent and long-continued palpitations in females, in each of which the same peculiarity presented itself, viz., enlargement of the thyroid gland; the size of this gland, at all times considerably greater than natural, was subject to remarkable variations in every one of these patients. When the palpitations were violent, the gland used notably to swell and become distended, having all the appearance of being increased in size, in consequence of an interstitial and sudden effusion of fluid into its substance. The swelling immediately began to subside as the violence of the paroxysm of palpitation decreased, and during the intervals the size of the gland remained stationary. Its increase of size, and the variations to which it was liable, had attracted forcibly the attention both of the patients and of their friends. There was not the slightest evidence of anything like inflammation of the gland.

One of these ladies, residing in the neighbourhood of Black Rock, was seen by Dr. Harvey and Dr. Stokes; another of them, the wife of a clergyman in the county of Wicklow, was seen by Sir Henry Marsh; and the third lives in Grafton Street. The palpitations have in all lasted considerably more than a year, and with such violence as to be at times exceedingly distressing; and yet there seems no certain grounds for concluding that organic disease of the heart exists.

In one, the beating of the heart could be heard during the aroxysm at some distance from the bed—a phenomenon I had ever before witnessed, and which strongly excited my attention nd curiosity. She herself, her friends, and Dr. Harvey, all stified the frequency of this occurrence, and said the sound was times much louder than when I examined the patient, and yet could distinctly hear the heart beating when my ear was stant at least four feet from her chest! It was the first or dull und which was thus audible.

The sudden manner in which the thyroid, in the above three males, used to increase and again diminish in size, and the nnexion of this with the state of the heart's action, are rcumstances which may be considered as indicating that the yroid is slightly analogous in structure to the tissues properly lled erectile. It is well known that no part of the body is so bject to increase in size as the thyroid gland, and not unequently this increase has been observed to be remarkably rapid, nstituting the different varieties of bronchocele or goitre.

The enlargement of the thyroid, of which I am now speaking, ems to be essentially different from goitre, in not attaining a ze at all equal to that observed in the latter disease. Indeed is enlargement deserves rather the name of hypertrophy, and at once distinguishable from bronchocele by its becoming ationary, just at that period of its development when the growth the latter usually begins to be accelerated. In fact, although e tumor is very observable when the attention is directed to it, t it never amounts to actual deformity. The well-known nnexion which exists between the uterine functions of the male and the development of the thyroid observed at puberty, renders this affection worthy of attention, particularly when we find it so closely related by sympathy to those palpitations of the heart which are of so frequent occurrence in hysterical and nervous females.

Another fact well worthy of notice is, that females liable to attacks of palpitation almost invariably complain of a sense of fulness, referred to the throat, and exactly corresponding to the situation of the thyroid. This sensation only continues while the paroxysm of palpitation lasts, and frequently is so urgent as forcibly to attract the patient's notice, who now complains of its inducing a sense of suffocation. Here the interesting question occurs, whether this feeling of something that impedes th respiration at the bottom of the throat, during the hysterical fit and which has been included under the general term *globu hystericus*—the question arises, I say, whether this feeling i always of purely nervous origin. To me it appears probabl that it is often induced by the pressure arising from a sudde enlargement of the thyroid, which enlargement subsides as soo as the fit is over. Of this I am certain, that the lump in th throat, of which such females complain, is often exactly referre to the situation of the thyroid; and, indeed, I have been told b other practitioners, upon the accuracy of whose observations can rely, that this swelling in the throat of females during th hysteric paroxysm has more than once excited their wonder. is obvious that if palpitations depending on functional disease the heart are capable of exciting this swollen state of the thyroi we may expect to observe the tumefaction of this gland also whe the palpitation depends on organic disease of the heart, as in th following case detailed to me by a friend.

A lady, aged 20, became affected with some symptoms whic were supposed to be hysterical. This occurred more than tw years ago; her health previously had been good. After she ha been in this nervous state about three months, it was observe that her pulse had become singularly rapid. This rapidi existed without any apparent cause, and was constant, the pul being never under 120, and often much higher. She next com plained of weakness on exertion, and began to look pale and thi Thus she continued for a year, but during this time she mani festly lost ground on the whole, the rapidity of the heart's actio having never ceased. It was now observed that the eyes assume singular appearance, for the eyeballs were apparently enlarged, so that when she slept, or tried to shut her eyes, the lids were incapable of closing. When the eyes were open, the white sclerotic could be seen, to a breadth of several lines, all round the cornea.

In a few months, the action of the heart continuing with unceasing violence, a tumor, of a horse-shoe shape, appeared on the front of the throat, and exactly in the situation of the thyroid gland. This was at first soft, but soon attained a greater hardness, though still elastic. From the time it was first observed, it has increased little, if at all, in size, and is now about thrice the natural bulk of the fully developed gland in a female after the age of puberty. It is somewhat larger on the right side than on the left.

A circumstance well worthy of notice has been observed in this young lady's case, and which may serve to throw some light on the nature of this thyroid tumefaction. The circumstance I allude to is, that from an early period of the disease a remarkable disproportion was found to exist between the beats of the radial and of the carotid arteries, the pulsations of the former being comparatively feeble, while those of the latter were violent, causing a most evident throbbing of the neck, and accompanied by a loud rustling sound. In about fourteen months the heart presented all the signs of Laennec's passive aneurism; the tumor in the neck is subject to remarkable variations in size, sometimes diminishing nearly one-half. None of her family have had goitres, nor was she ever in any of the usual localities of the disease.

DISEASES OF THE DIGESTIVE ORGANS.

LECTURE L.

GLOSSITIS.—ENLARGED TONSILS.—AFFECTIONS OF THE ŒSOPHAGUS. DYSPHAGIA.

I SHALL next proceed, gentlemen, to make some clinical observations on diseases of the digestive organs; but remember that you are not to expect from me any detailed observations on the symptomatology of disease; it is my intention rather to impress on your minds the marked features which individual cases in hospital sometimes present, and to comment on what you have seen at the bedside, and the treatment which you have seen me adopt.

A case which I have attended, though not in hospital practice, induces me to make a few observations on inflammation of the tongue.

Mr. B., a medical student, solicited my attendance. I found him labouring under severe febrile symptoms of a week's continuance, ushered in by violent rigors, great pain in the neck and occiput; somewhat relieved on the second day by profuse epistaxis. The left half of the tongue became then very tender and painful, and gradually increased in size. At my first visit it was enormously swollen, and nearly filled the entire cavity of the mouth, which could scarcely be closed on account of the protrusion of the tongue. The right half of the tongue was perfectly natural, and its comparatively diminutive size formed a striking contrast with that of the left, the median line forming a perfect boundary between the swollen and the healthy parts. Two or three applications of six leeches at a time to the inflamed half, part of which, at my first visit, appeared on the verge of gangrene, produced a speedy decrease of the tumor and inflammation. The bleeding from the leech bites was very great.

consequence of the detumescence of the tongue, articulation eglutition, which before had been very difficult, were quickly red. He is at present (two years since the attack) able to k perfectly, although the left half of his tongue is still eptibly increased in size.

his case is interesting in several points of view. True pathic glossitis is an extremely rare disease. J. P. Frank ly saw one case during his whole life. Four cases of it have en observed of late years in different parts of Europe;* one which is given in a German journal on the authority of my riend Dr. Gottel, of Elbing,† a gentleman upon whose accuracy implicit confidence may be placed. In none of these cases, however, was the inflammation limited *to one half of the tongue*, and in none of them did it occur to the medical attendant to apply leeches to the tongue, a mode of treatment the great benefit of which will appear by contrasting this case with those given in the *Edinburgh Journal*, from which it appears that this disease is formidable and tedious when blood is not extracted directly from the tongue. Leeches were applied by Dr. Gottel under the chin, and the general antiphlogistic treatment was actively pushed; the same was done by Dr. Maillier. In addition to these remedies Dr. Olivet used local detraction of blood from the tongue —at first by means of incisions on the dorsum of the tongue, and afterwards by means of opening the sublingual veins. The application of leeches appears to me preferable to either.

Dr. Neligan informs me that he had a case of idiopathic glossitis under his care in Jervis Street Hospital in the year 1846. It occurred in a stout countryman, aged 40, and was caused by his working for some days up to his waist in water, in draining a river. The affection came on with rigors and the ordinary symptoms of fever, as in the case of Mr. B.; but the entire tongue was engaged, and was so enormously swollen as to prevent the patient from articulating, swallowing, or closing his mouth. Deep incisions were made transversely into the substance of the organ, which were allowed to bleed freely, and he was put rapidly under the influence of mercury; this plan of treatment proved so effectual that he left hospital on the third day, quite well.

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* See *Edinburgh Journal of Medical Science*, No. I. p. 52.

† "Beobachtung einer wahren glossitis."—*Gräfe and Walthers Journal für Chirurgie*, siebentel Band, zweites Heft.

The disease, then, would appear not to be attended with danger, but to require prompt and active treatment.

When common cynanche tonsillaris, scarlatina, measles, or any other disease which induces inflammation of the throat, attacks persons of a scrofulous habit, enlargement of the amygdalæ is a very frequent consequence. In children it is more common than in adults, and when it takes place it requires prompt attention, for if these glands be permitted to become hypertrophied, and to remain so for many years, their size becomes at last considerable, and they may be perceived as large as walnuts, leaving but slight interval between them, so that the disease being confirmed, the patient when he grows up is constantly annoyed by an irritation which in many produces a slight hem or occasional hawking, and in all is the source of much inconvenience or even danger, when the person, from cold or any other cause, is attacked with sore throat. Then the inflammation, which under other circumstances would be moderate, assumes a great degree of violence, the amygdalæ swell suddenly to an excessive size, and the attack is both severe and long-continued.

These facts prove the propriety of endeavouring to restrain enlargement of the tonsils in children. After acute diseases, time, with a tonic regimen, country air, tepid salt-water baths, and sea bathing, will frequently remove this affection, particularly if assisted by gargles, such as warm salt water, a solution of sulphate of zinc, or infusions of astringent vegetable substances with alum, &c. When these means fail, we may try the daily application of tincture of iodine mixed with a little treacle.

The principal remedy, however, is the nitrate of silver; many use this in solution, but I prefer Mr. Cusack's method, which is as follows:—The solid stick of lunar caustic, or some of the latter in powder, and placed in a proper instrument, must be kept steadily pressed against a particular spot of the enlarged gland for two, three, or five seconds; this will leave in the part, when healed, a slight depression like the largest pit formed by a small-pox pustule. When this has been effected, which is usually in about five days, a similar proceeding must take place with the other amygdala; and so on with each, turn about, until the desired reduction of size has been accomplished. When the glands are large this process usually requires about six months;

is slow but sure, and must be intermitted when any accident ives rise to temporary sore throat or to catarrh.

Some use ligatures to reduce these glands in size, and others ut them out; the latter operation is not altogether free from anger, as was proved in the case of a patient of mine, who, ontrary to my advice, went to Paris to have it performed. The ft amygdala was excised, and the gentleman was very near ying of the consequent bleeding.

The following case of *acute inflammation of the œsophagus* is articularly worthy of your attention, on account of the extreme rity of the disease, and because its symptoms have for that ason been either erroneously or imperfectly described by thors.

The late Dr. Mackintosh, in his *Elements of Pathology* (vol. i. 228), observes—" That of all the structures in the human dy, the œsophagus is perhaps the least liable to disease. In neral it is difficult to detect inflammation of the œsophagus till eration and constriction take place. I have seen only one e of universal inflammation of this tube not caused by poison, ." Dr. Watson, in his *Lectures on the Practice of Medicine*, kes the same remark as to the rarity of affections of this t of the alimentary canal, and says that he has seen a few es in which he *inferred* a spontaneous inflammatory condition the tube.

t is no wonder, therefore, that the description given by these hors of œsophagitis is very imperfect; the same may be said of t given by others. The best description of the disease is that n by J. P. Frank in his Epitome. If I recollect right, rcrombie has recorded one well-marked case of œsophagitis. nge enough this disease is not spoken of at all in that llent work, the *Cyclopædia of Practical Medicine*.

he inflammation in the following instance was evidently the lt of cold, and, occurring in a healthy habit, it ran through course in a few days. The case is in the gentleman's own ds, for when the disease was cured I requested him to give me ort account of it in writing.

February 24th, 1835.—For some days I felt as if I had ght cold with something like sore throat. I felt as if the of the tongue at the left side was sore. By degrees this extended downwards; a ring about the lowest part of the throat became painful on swallowing. The pain was most sensible on the left side.

"26th.—I took a bit of bread before dinner, and on attempting to swallow it perceived great pain from the commencement of the throat, proceeding downwards towards the chest, as if the bread was then impeded by something, and from thence it seemed to proceed with increased pain to the back between the shoulders. I felt no want of appetite at dinner, but the attempt to swallow caused considerable pain. The night was passed in a state of great restlessness and with headache, violent pain sometimes seizing me on some little change of position, as it does in lumbago. The pain then seemed to affect the whole chest, and extending to the back caused a hot, burning sensation directly between the shoulders.

"27th.—On attempting to swallow, I felt such pain as to force me to cry out as if the entire passage from the throat to the stomach was inflamed, and that everything, whether fluid or liquid, had to force its way painfully through the passage. In swallowing, it seemed doubtful whether the food could proceed."

So far the details were furnished by the patient himself. In addition, I may remark that on the 28th the inflammation had evidently begun to diminish, and that in the course of a few days more it had entirely disappeared. The treatment was restricted to abstinence and antimonial diaphoretics. There was no redness to be seen in that part of the throat which is visible when the mouth is opened.

The two following cases of *scirrhus of the œsophagus*, which were in our wards at the same time, afforded a good opportunity of comparing together the symptoms observed in each. In one, Benjamin Spear, we for a long time thought that the difficulty of swallowing was spasmodic, so completely was the power of deglutition restored (and that, as will be seen from the notes of the case, for many days) by passing an œsophagus bougie into the stomach. In the other, Thomas Berry, the patient could at all times swallow liquids with great facility. He was able to drink a tumbler of water with as much apparent ease as any healthy person, but soon after gulped up the fluid by mouthfuls: as the fluid passed rapidly into the stomach, and was only rejected after arriving there, the diagnosis was rendered very obscure, and uted his sufferings to disease of the stomach itself. On ount a trial was not made with the bougie, except once he man's admission, by Mr. Murphy, the pupil who had of this patient while in the hospital. Mr. Murphy did ceed in passing the bougie, but as he never before ed this operation, we did not attach a proper degree of this trial.

gether I should hope that the account I shall give you symptoms and post-mortem examinations of these two may prove useful in elucidating the diagnosis of stricture esophagus. These cases afford another example of the ing, or even contradictory, nature of certain symptoms rent individuals affected with the same disease. It is lly necessary for the physician to be aware of this tance, for it teaches him that in endeavouring to make true nature of any affection, he must not refer to a fixed, rying standard of comparison. Whether these variations two following patients could be accounted for by any es in the diseased parts observed after death, it is to conjecture.

as Berry, aged 64 ; admitted September 23rd ; ill four . He states that he had been always temperate and and that about five months ago he was attacked, after to cold, with cough, without expectoration, pain in the any other symptom for about a month, when he experi- slight pain at the ensiform cartilage, which generally after eating. This continued every day, becoming more or five weeks, and he then experienced a difficulty of ing which he referred to the seat of pain, where he says l always stopped for about two seconds, and was then . These two symptoms—viz., pain at the ensiform car- nd inability to retain food—have every day become more ng, and are the only things of which he complains ; took cine before admission.

nt state.—Extreme emaciation, and great debility, having arcely anything for the last two months, being quite to retain either solids or fluids; the latter pass without fficulty into the stomach, and remain there for about half e, but are then gradually gulped up, apparently without t. The cough has been very troublesome for the last few days, accompanied by abundant mucous expectoration. Never vomited any black matter, or anything except what he swallows.

Bowels have been costive since his illness commenced; frequently for eight days without a motion: appetite good; pulse 54; abdomen fallen; no tumor to be felt; the skin is shrivelled and dry, its elasticity quite impaired; tongue clean and moist; skin cool; sleeps tolerably.

℞. Extracti Conii, granum;
Syrupi,
Mucilaginis, āā, quantum sufficit ut fiat bolus quater in die sumendus.

26th.—Was able to retain the bolus, and also a small quantity of broth; feels improved; pain and tenderness in epigastrium diminished; urine high coloured.

27th.—Cough very troublesome, preventing sleep; abundant sero-mucous expectoration; no change in the other symptoms.

Applicetur vesicatorium abdomini. Capiat Pulveris Conii grana duo ter in die.

29th.—The blister did not rise, though left on for twenty-four hours; milk now remains on the stomach, but a solid is immediately rejected. Complains of great pain in the epigastrium, where there is also considerable tenderness.

He says he knows by the sensation which the food produces when going down, whether it will be rejected or not, and he so accurately predicts this, that many suspect he has a power of bringing it up when he pleases. When it is to come up, it excites a kind of spasm, from which he seems to suffer much. Pulse 70; cough very troublesome; expectoration copious, yellow mucus, mixed with a great deal of serum; no rale over any part of the chest. A sinapism was ordered to be applied over the abdomen.

30th.—Sinapism produced no effect; took some tea and whey yesterday, which he immediately rejected, and was shortly after attacked with a severe pain about the false ribs, which he attributes to the straining; this, with the cough, kept him awake the greater part of the night.

Turpentine stupes, and afterwards a sinapism.

October 1st.—He states that yesterday evening he felt that "*his swallow had returned*," and that his "*stomach was opened*," and immediately ate a large bowlful of stirabout and milk, all of which he was enabled to retain on his stomach. Bowels opened once; all his symptoms are aggravated when the bowels are confined; acetic solution of cantharides to be rubbed to the abdomen.

3rd.—The last application caused vesication, and he is to-day much improved, and can retain solids as well as fluids.

6th.—Ate some bread yesterday evening, but was unable to retain it, and has since frequently vomited; cough troublesome; complains of pain about the false ribs, also in the epigastrium, which is still tender; tongue moist.

Capiat Acidi Hydrocyanici minima tria ter in die.

24th.—No material change since last note: one day he could retain his food, and the next would be unable to do so. Last night was attacked with severe pain in the right false ribs, which prevents him from taking a full breath: troublesome cough; copious expectoration. The whole of the right side is so tender that he cannot bear the slightest pressure; great thirst; tongue furred and moist; pulse 56.

26th.—The pain last night became so severe in the right side that it caused a kind of convulsion, during which he worked violently for two hours. Tongue furred and moist; great thirst; can scarcely speak; extreme debility; has not eaten anything for the last three days.

Died on the 27th.

Autopsy eighteen hours after death.—The abdomen was considerably distended, though before death it was remarkably collapsed, and tensely concave. On opening the abdomen the stomach and intestines were found distended with air; and in the latter were hardened feces. On raising the stomach, the coats were so thin and so much softened, that the fingers passed through them in every direction; the mucous membrane was very soft and easily detached. The last two inches of the œsophagus were inflamed; and above this, to the extent of about three inches, was a continuous mass of scirrhous growth, contracting the œsophagus to about the size of a goose-quill; the mucous membrane above this was thickened and softened, and could be easily separated from the submucous tissue.

Left lung healthy; the right was connected by strong adhesions to the parietal pleura, in the cavity of which was found nearly a pint of thin fluid, mixed with shreds of recent lymph; the lower portion of the lung was covered with lymph; spleen enlarged and very soft. Two of the vertebræ opposite the stricture presented knobs on their anterior surface. These knobs projected about three-quarters of an inch beyond the remaining surface of the vertebræ; they were covered with a thin lamina of bone externally, and they displayed a healthy cancellated structure, continuous with the cancellated tissue of the vertebral bodies. They consisted, therefore, of an exuberant growth of healthy bone, and they each comprised a portion of two contiguous vertebræ. The intervertebral substance had undergone a corresponding increase, and was prolonged so as to divide each knob into two portions. It could not be ascertained whether these bony protuberances had any connexion with the production of the stricture. In this case the vomiting or rejection of the food *after it had passed the stricture* was a very remarkable circumstance; it may, perhaps, be explained by supposing that the inflammation of the œsophagus extended to the stomach. The stomach was excessively thin and membranous; in fact it was, like all the muscles of the body, extremely emaciated.

The scirrhous mass in this man was rather considerable, and had caused a nearly complete degeneration of all the tissue of the œsophagus. Posteriorly, where it was thickest, it was three-quarters of an inch in depth, and had evidently arrived at the stage next to that of ulceration; it was not yielding or elastic. These circumstances accounted not only for the narrowness of the stricture, but for the inflammation of the mucous membrane of the stomach and œsophagus: on this account, too, the bougie would not pass.

In all these particulars it forms a strong contrast with the next case, where the morbid tissue was still elastic, and the structure dilatable and free from inflammation.

Benjamin Spears, aged 50, admitted into hospital August 29th. He had been a soldier, and had served many years in the East Indies; of most intemperate habits. States he has been always healthy, never having jaundice or ague; nor is he subject to cough or dyspnœa. About a month since he noticed a slight soreness on swallowing, referred to epigastric region, which continued for four or five days; when on attempting to swallow a piece of bread, he found it stop at a part corresponding to about the centre of the ensiform cartilage, and he immediately rejected it; and since then he has been unable to retain anything, as on its passing down it is rejected in a few seconds without any effort: he has taken nothing for three weeks. Bowels have been confined; had one motion each week; appetite has been bad, and his sleep much disturbed.

Present state, August 30th.—Great emaciation; countenance sallow, anxious; abdomen fallen; total inability to retain either solids or fluids. Feels on attempting to swallow a pain at inferior part of ensiform cartilage, to which he refers the obstruction; the food is returned without any effort, the diaphragm scarcely appearing to act. On measuring the quantity swallowed, and after its being rejected, it is found increased, appearing to be more than the addition of the saliva would produce. Some tenderness on pressure in epigastrium and right hypochondrium; has no pain elsewhere; no tumor; *no dyspnœa or cough;* much thirst; tongue dry and slightly coated. Bowels confined; extremities cold; pulse 100, very feeble and small; respiration 15, natural; on deep inspiration feels some soreness in right hypochondrium.

> ℞. Solutionis Ichthyocolli, f℥iij.
> Tincturæ Opii, min. v. Fiat enema bis in die injiciendum.
> Applicetur Emplastrum Lyttæ epigastrio.
> The œsophagus bougie to be passed.

31st.—Œsophagus bougie passed yesterday by Mr. Collis, *who ays he met with no obstruction:* immediately after the passing f the bougie, felt some water which he took pass beyond the bstruction; has taken some whey since, had slight nausea on wallowing it, but it remained.

31st.—To get a pint of isinglass and milk.

September 1st.—On attempting to swallow a small piece of eat yesterday, felt considerable pain, and rejected it immediately. s able to swallow and retain the isinglass and milk; is greatly etter.

4th.—Has had no vomiting since; has taken the isinglass and ilk regularly. Bowels are confined; has had no cough; was eized yesterday with a severe stitch in right side, under the amma, attended with dyspnœa.

7th.—Had vomiting yesterday, but was able to retain some of his milk; is very weak; the pain in side better; very little cough. Tongue dry; pulse 76, very feeble.

9th.—Total inability to swallow; everything rejected; refers the obstruction to same place as before; pain in side better. Pulse 80; no cough. Bougie passed without difficulty.

10th.—*Retained everything after passing the bougie;* has much headache; the tenderness of epigastrium nearly gone; pain in the side better.

11th.—Was seized with severe pain in right infra-mammary region last night, with much dyspnœa and cough; had no vomiting since.

12th.—Pain still very severe; much cough; expectoration scanty; no vomiting.

13th.—Pain still very severe; much cough; no vomiting.

14th.—Pain still severe, preventing him from sleeping; had no vomiting.

18th.—Pain in side still continues; is very weak; cough troublesome; sputa very abundant; *no vomiting.*

25th.—In same way; *no vomiting;* expectoration profuse; pain less severe.

30th.—In same way.

October 8th.—Mentioned that he had a swelling in the perineum, which was opened by Sir Philip Crampton, and a large quantity of very fœtid, thin matter discharged, from which he found great relief. Cough very severe; expectoration abundant.

12th.—Very weak; continues in the same way; cough severe; expectoration profuse, of same character as before.

18th.—Expectorated during the night a large quantity of puriform matter, very fœtid; is excessively weak; pulse 100, feeble and thready; extreme emaciation. Examined in infra-mammary region of right side corresponding to the seat of pain; a distinct gargouillement with cavernous respiration was for the first time audible; pectoriloquy partial; extremities cold.

Died at three o'clock on the 19th.

Autopsy.—Appearance of body extremely emaciated. On opening the œsophagus, all its upper part was found quite healthy, to within three and a half inches of its termination, where the stricture existed, through which the little finger could not be passed, but which admitted a large metal bougie, one-quarter of nch in diameter. On slitting open the strictured parts, the ous membrane appeared quite healthy, without any appearance lceration; and on dissecting the mucous coat off, the stricture found to arise from a deposit of a cartilaginous structure in circular fibres of the muscular coats, which, as well as the gitudinal ones, were exceedingly thin, and scarcely to be inguished; the deposit was irregular, being thicker in one t than another. The stricture was an inch and a half in gth; the mucous glands above the stricture were something arged; the stomach healthy, but contracted; and the intes- es presented no morbid appearance. Strong adhesions ched the right lung to the parietes, which, on being torn ough, the fingers passed into a large superficial cavity of gular depth, corresponding to the infra-mammary region, ere the acute pain was complained of; several crude tubercular osits existed in different parts of the lung, but none of them state of softness; several small calcareous bodies were found he apex of the same lung: left lung was quite healthy.

shall conclude with a few observations on a curious affection he organs of deglutition, which occurred to me in the case of ervous young clergyman, concerning the state of whose health as consulted by Surgeon Barker. He complained of various ptoms indicating debility and dyspepsia, but was chiefly oyed by a painful and convulsive struggle, as he expressed it, ch sometimes took place between the bit he had swallowed just re it entered the stomach, and a something that seemed to st its further passage downwards. This lasted only for a few onds, and was very distressing both to himself and the specta- , for, of course, it usually occurred at meals, and rendered unwilling to dine in society. In another case, these sudden cks of temporary dysphagia are become so habitual, that the tleman never ventures to eat unless a glass of water be within reach; for in him the stopping of the descent of the bolus ood is attended with an urgent sense of suffocation. This tleman, an excellent anatomist, thinks that the sense of ocation is entirely nervous, or at least that it has nothing to with any mechanical obstruction in the glottis arising from neighbourhood of the descending food. In both these cases, cause of the disease appeared to lie in the increased or rather deranged sensibility of the œsophagus itself. In wounds of the cervical portion of the spinal marrow, it occasionally occurs that the sensibility of the œsophagus is so increased, that deglutition is rendered impossible in consequence of pain, a fact sufficient to direct us to apply our therapeutic agents to the neck in such cases as I have related.

In fever I have witnessed several times a very peculiar species of dysphagia, evidently occasioned by flatulent distention of the stomach to such an extent that the lower portion of the œsophagus partook of this condition; at least I conjecture so, for during the struggle of the dysphagic paroxysm, a gurgling noise was heard, as if the bit of food was met by a portion of air contained in the lower part of the œsophagus; my friend Dr. Autenreith, of Tübingen, has particularly remarked this symptom, or at least something like it, in what he calls the abdominal typhus fever of young people; for he says, if the patient takes any drink, a peculiar gurgling noise is heard as if the fluid was poured into a lifeless bag. Now, in precisely such a case, Mr. Rumley and I saw a young lady affected, in addition to this noise, with so great spasmodic dysphagia, probably from the entrance of the wind into the lower end of the œsophagus, that she altogether refused to drink. This phenomenon gradually disappeared, and the lady ultimately recovered; but it deserves to be remarked, that in general this symptom and the gurgling noise described by Dr. Autenreith are very bad omens in fever.

LECTURE LI.

DYSPEPSIA.—HABITUAL CONSTIPATION.—VARIOUSLY COLOURED STOOLS.—INTESTINAL CALCULI.

THERE is at present in the house a case of a man labouring nder a peculiar species of indigestion, for whom I prescribed nagnesia. He had been for a long time suffering from chronic heumatism, and this was combined with dyspepsia, characterized y a tendency to supersecretion of acid in the stomach, with astrodynia and sour eructations. In addition to anti-rheumatic nedicines, and enemata to keep the bowels open, we prescribed he nitrate of bismuth with magnesia, for the purpose of relieving ain and acidity. In gastrodynia, with increased secretion of cid from the stomach, one of the best remedies we possess is he nitrate of bismuth, with which I am in the habit of combining norphia, or, as in the present case, magnesia. I ordered ten rains of magnesia, twenty of powdered gum-arabic, and six of he nitrate of bismuth, to be taken two or three times a day, ccording to circumstances; this powder was to be followed by table-spoonful of water, containing one-sixteenth of a grain of nuriate of morphia.

In such cases, if milk does not disagree with the patient, you nay pour the powder into a quantity of boiled milk; allow it to ool, and then stir it with a spoon, and make the patient swallow . The gum-arabic is used for its demulcent properties, and ecause it enables the patient to swallow the powder with more cility; and the fluid in which you mix the powder, whether it e water or milk, is to be used warm, in order to dissolve the um more speedily. This is a very good combination, and I ve seen many cases of dyspepsia, with acid eructations, which d resisted bismuth, prussic acid, or morphia, given singly, eld to it.

I need not state to you the reasons why magnesia and other ntacid remedies are given in such cases; but it may be necessary to mention briefly the principle on which opiates are prescribed. Dr. Elliotson has shown that many of the morbid states of the stomach depend on deranged nervous energy, and that in such cases the most efficient means we can use are narcotics. As to the nitrate of bismuth, its mode of action is not very obvious; but we know that the metallic salts possess great influence over various nervous diseases as well as over morbid secretions. Witness the effects of carbonate of iron, oxide of zinc, the preparations of arsenic and antimony, and several others. On this account we prescribed the bismuth, hoping to derive some benefit from its use, as well with respect to checking the sour eructations, as to relieve the gastrodynia.

It may be well to make a few observations in explanation of the manner in which tonics and narcotics act in diseases of the stomach. Formerly physiologists were of opinion, that in weakly stomachs the act of digestion was accompanied by the formation of acid and flatulence, because the food being imperfectly acted on, was allowed to undergo the process of fermentation, a process which gave rise to the acid and the wind in the stomach. In compliance with this view, physicians endeavoured to procure relief in these cases by prescribing a regimen little likely to undergo a fermentation capable of causing a production of either air or acid; and they endeavoured to neutralize the bad effects of these, when produced by means of the administration of alkaline medicines.

They used, however, to be astonished at observing that many articles of food, which outside the body never formed any acid during fermentation, or more properly putrefaction, occasioned, nevertheless, when eaten, as much acidity in the stomach as any other aliments.

It was remarked also by practical men, that although present relief was obtained by means of alkalies, yet their constant exhibition seemed rather to increase than diminish the tendency to the formation of acid in the stomach. This fact could not be explained in the then state of physiology. In the year 1823, I read an essay on this subject before the Association of the Kin and Queen's College of Physicians, in the fourth volume o whose transactions it was subsequently published. In thi essay I pointed out the true source of the acidity and flatulenc observed in dyspepsia, and proved, contrary to the receive opinions, that it was the result of a morbid secretion. In fact, I showed that the stomach has the power, when in health, of secreting acids and air, both essentially necessary for the solution of the alimentary mass; and I proved that in dyspepsia this power is morbidly deranged in such a manner as to give rise to a supersecretion of acids and air. This view of the subject was soon recognized to be correct, and in consequence new methods of treating dyspepsia were proposed. Among the proposals for obviating acidity, that of Dr. Elliotson, who recommended prussic acid and other narcotics capable of acting upon the nerves of the stomach, through the influence of which secretion is effected, was found to be the most successful, and has been sanctioned by the most extensive experience.

In this essay, I also proved by chemical experiment, that the natural acid of the human stomach was identical with lactic acid —was, in fact, lactic acid; a discovery not made by Berzelius until 1830. Nevertheless, nearly every writer on the subject since has assigned to the Swedish chemist the honour of this discovery, although I anticipated him by at least seven years; whatever credit therefore is due to the original discoverer of this fact, I think I am fairly entitled to claim.

Another very important and frequent symptom in dyspepsia has been termed gastrodynia. Now the pain in the stomach accompanying gastric inflammation and long-continued organic disease, is not included within the meaning of *gastrodynia*, which, therefore, denotes only the pain that occurs in dyspeptic, nervous, and hysterical diseases, and supposed to be of a neuralgic character.

In some cases its neuralgic nature is sufficiently evident, for the attack of pain is often suddenly produced by something affecting the nervous system, as anxiety, alarm, anger, &c.; and its commencement in such cases appears at times totally unconnected with any previous derangement in the act of digestion. In the case of a medical man of eminence who lately consulted me, the pain is for the most part induced by the causes just enumerated; is sudden in its appearance, and when it subsides, leaves no traces behind; some of the paroxysms have even continued several days, but were not followed by tenderness of epigastrium, diminution of appetite or digestive energy, or foulness of the tongue. This is the more remarkable, as the pain he suffers is excruciating. The first attack took place twelve years ago, at which time he was about 50 years of age, and of robust frame. It lasted three days and nights, without scarcely any intermission or abatement. Since that period the paroxysms have frequently returned, but seldom last more than four or five hours; lately, however, Mr. Houston and I visited him during a very severe attack, which continued two days, and had been induced by mental anxiety. Though the chief exciting cause is any violent impression on the nervous system, yet certain articles of diet which disagree with the stomach also produce pain. Walking, particularly after dinner, is apt to produce pain, with eructation of wind; and a walk long enough to fatigue him considerably never fails to bring it on. Most usually the attacks commence several hours after he has been asleep, and awake him at one, two, or three o'clock in the morning. This latter circumstance confirms the conclusion that the disease is neuralgic.

The pain is not relieved by oil of turpentine exhibited either by the mouth or in injections, and no permanent benefit whatever is derived from any opiate or narcotic; occasionally, when the pain is excessive, he takes large doses of opiates, but they act merely as palliatives, and in proportion to the quantity taken, produce very little effect in diminishing his sufferings. Carbonate of iron, in doses of ten grains three times a day, and continued for a week or a fortnight, has appeared more serviceable than any other medicine when the paroxysms were frequent in their recurrence. Magnesia, bicarbonate of soda, and soda water, taken in the evening, he has found soothing, and he says they produce a permanent good effect. Nitrate of bismuth had not afforded any relief. In this case the pain in the stomach did not depend on that state of the digestive organs in which acidity is the prominent feature; neither was it attended with pyrosis, properly so called; and accordingly we find that although alkalies were useful, they did not by any means cut short the paroxysm, while the nitrate of bismuth totally failed.

When the fit of gastrodynia commences, as it always does, in the case of a young gentleman lately treated by Mr. Kirby and myself, when there is much acidity of the stomach, then magnesia affords prompt relief. Some of the particulars in this case deserve notice in a practical point of view. He is thirteen ars old, extremely intelligent, tall for his age, and slender. e has been subject to gastrodynia for several years; it comes after intermissions of various durations; but since the first tack, he has seldom been a month altogether free from roxysms. These, when they once commence, recur freuently for a week, or even a month. He is not warned of eir approach by previous constipation or heartburn, but, as as before remarked, always observes himself to be affected ith acidity of the stomach at the time. The attack always variably comes on in the evening after dinner, and somemes awakens him at night: it is accompanied by fulness, istention, and a sense of heat in the stomach, together with dead pain extending from the epigastrium to the back. uring the fit, and for some hours after its cessation, the pigastrium feels sore and tender. The fit always lasts several ours, and terminates with eructation or vomiting of the conents of the stomach, which he has latterly been in the habit of ccelerating by tickling the fauces, &c. He mentioned that ome of the matter he vomited fell accidentally on a pair of lue trowsers, which it stained red.

In this case I tried prussic acid, acetate of morphia, and other arcotics, without any very notable effect either in preventing r relieving the pain. The nitrate of bismuth did not produce any immediate benefit; but when it was continued for a day or two, it never failed to diminish the violence of the attacks, and finally procured a complete intermission. This medicine always acted on the bowels as a mild aperient. Antacids, however, especially calcined magnesia, were more effectual than any other medicines in relieving the pain, which they generally did in less than half an hour. All articles of diet which disagree with the stomach and promote acidity are sure to induce an attack.

This case, in its symptoms and mode of treatment, differs, then, essentially from that first detailed, and seems to point out well-marked acidity of the stomach as indicating antacids to be the best means of diminishing pain in such cases. Nitrate of bismuth also exerts a beneficial influence, and probably acts by gradually checking the tendency on the part of the stomach to pour forth an acid secretion; but it is when the fit of pain is accompanied and succeeded by an increased secretion, not of an acid, sour and discoloured, but of an insipid, transparent, and watery fluid, it is in that species of gastrodynia properly called pyrosis that the nitrate of bismuth is found superior to all other remedies; and, indeed, for such cases it was originally recommended.

As I have known some inconvenience to arise from ignorance of a suitable menstruum for taking this medicine in the form it is usually prescribed, viz., one part of the nitrate to three of powdered gum-arabic, it may be well again to remind you that the patient ought to mix this powder with a wine-glassful of warm milk, which may be allowed to stand for a quarter of an hour, and ought to be briskly stirred immediately before it is swallowed.

As I am at present speaking of gastrodynia merely as a symptom, with a view of determining what means are best suited for the removal of the pain in any particular case, I shall not enter upon the subject of the constitutional treatment by which its paroxysms may be permanently averted. With regard to the neuralgic gastrodynia, it is important to observe, that although in the instance of this disease which I have detailed, anodynes were not of service, yet in general they are found extremely beneficial, not merely in shortening the paroxysm, but in preventing its recurrence, of which I have seen several examples. Concerning the utility of prussic acid, morphia, and narcotic preparations in general, in diminishing the tendency to acidity of stomach, when exhibited with judgment, it is unnecessary for me to speak, it has been so ably done by Dr. Elliotson. Their permanent good effects in gastrodynia and dyspepsia were, I believe, first pointed out in a work published by Schluter many years ago.

I have likewise derived the greatest satisfaction from nitrate of silver and stramonium in cases of gastrodynia, in which almost every other remedy had been tried without success. In such cases I frequently direct, in conjunction with the means already spoken of, diligent friction over the dorsal vertebræ with the liniment of St. John Long, for which I have already given a formula.

There is no more troublesome symptom in derangements o the digestive organs, nor any more difficult to overcome, tha habitual constipation. In many chronic cases, too, it is of th greatest consequence to procure daily and regular discharges from the bowels. *Lavements* effect this purpose most conveniently, and possess the advantage of not interfering with, or weakening the digestive functions of the stomach or upper portion of the alimentary canal. Many persons, however, particularly females, have an insuperable objection to this method of obtaining relief, and acquire the habit of taking aperient medicines whenever their bowels are confined.

Various causes have combined to render blue pill and calomel almost popular remedies, to which many have recourse when their bowels are irregular, or the stomach out of order. Indeed, it is quite incredible what a number of persons are in the habit of taking these preparations, either singly or combined with other purgatives, whenever, to use the common expression, they feel themselves bilious. This habit, sooner or later, induces a state of extreme nervous irritability, and the invalid finally becomes a confirmed and unhappy hypochondriac; he is, in fact, slowly poisoned, without the more obvious symptoms of mercurialization being at any time produced.

It is almost unnecessary to observe, that although saline aperients give temporary relief, they afterwards increase the tendency to constipation, and weaken the stomach. The class of purgatives least liable to objection consists of magnesia, aloes, rhubarb, colocynth, &c., for exhibiting which many well-known and excellent formulæ are used. But even these substances, whose debilitating effects on the stomach are not near so great as that of mercurials and salts, are attended with the disadvantage of being required in larger doses in proportion as the bowels become accustomed to their action.

To remedy this evil, Dr. Elliotson has suggested a valuable combination, consisting of compound extract of colocynth with minute doses of croton oil. This I have frequently given with the best effects; but it is liable to a serious objection, for unless the croton oil be perfectly mixed with the mass, some of the pills may be too powerful, while the others are comparatively inert, and consequently the patient is exposed to the danger of hypercatharsis, as I have twice witnessed, although in both cases the medicine had been prepared in the shop of a respectable apothecary. The following combination will, in general, serve to obviate costiveness, without diminishing the appetite or being attended with the necessity of the dose being increased as the patient becomes accustomed to its use:—

R. Electuarii Sennæ, ℥ij.
Bitartratis Potassæ, ℥ss.
Carbonatis Ferri, ʒij.
Syrupi Zingiberis, quantum sufficit ut fiat electuarium.

For the first few days I generally add about two drachms of sulphur to this electuary; but as soon as its operation has been established the quantity of sulphur may be diminished one-half, and at the end of a week it may be omitted altogether. The dose must be regulated by its effects, but in general a small tea-spoonful in the middle of the day and at bed-time will be sufficient.

The value of the carbonate of iron as a tonic aperient has not been duly appreciated; I have succeeded in curing with it alone a practitioner of eminence in this city, who had been long subject to extreme constipation, and had been reduced to the necessity of taking an enormous dose of purgatives almost every week.

When injections, carefully administered with Read's syringe, fail to remove obstinate constipation, which they sometimes though rarely do, other means must be resorted to. Some practitioners are in the habit of giving one dose of active purgatives after another, adding to the strength of each dose in proportion to the obstinacy of the case. This is an imprudent and hazardous mode of proceeding. In such cases the stomach will generally be capable of retaining castor oil; and I prefer giving repeated doses of this medicine to any others when the bowels display such an unusual degree of obstinacy, inasmuch as it may be safely accumulated in the alimentary canal, and will in the end procure evacuations, without any of the dangers which attend repeated doses of acrid and drastic substances. I generally commence with two ounces, to be repeated every second hour until the desired effect is produced. I do not recollect who it was first made the important observation, that in obstinate constipation the first dose of castor oil must be large, but when this has acted on the bowels, the dose may be gradually diminished, provided that the medicine is continued every day for some time. I have verified this in private practice, and lately had a patient in th Meath Hospital whose bowels had resisted injections and th strongest cathartics. Three ounces of castor oil continued for two days in succession, two ounces on the next day, and one ounce on the fourth, were found quite effectual. In some the daily dose may be thus gradually diminished to a tea-spoonful at bed-time.

When a tendency to constipation is habitual, and the patient is not effectually relieved by the daily use of injections, and when the peculiar circumstances of the complaint render the administration of aperient medicines by the mouth inadmissible, great advantage may be derived from the application of purgative liniments to the abdomen. The one I have found most useful consists of four parts of castor oil and one part of tincture of jalap. This must be diligently rubbed into the region of the stomach every morning before the patient rises, and it must be done under the bed-clothes, lest the unpleasant odour should sicken the stomach. I am indebted to a medical friend for this suggestion, which I used with success in the case of a young gentleman whose state had become almost hopeless.

In constipated habits, I have likewise occasionally derived very remarkable benefit from the use of nitric acid given in sufficient doses. It seems, like the carbonate of iron, to possess the advantage of combining tonic with aperient qualities.

In connexion with this subject, I may remark, that long-continued and repeated attacks of constipation, by enlarging the cæcum and colon, lay the foundation of other diseases. This happens most frequently in females, but is not uncommon among males. In such cases the enlargement of the intestines may occasion either of two distinct forms of disease, both attributable to the retention and accumulation of hardened feces. In one form the symptoms are calculated to mislead the medical attendant, by inducing him to believe that his patient is labouring under chronic hepatitis. Pain and tenderness, and in some hardness, or even a degree of enlargement, are perceptible in the right hypochondrium, while the patient's aspect is bilious, and he not unfrequently complains of pains in the right shoulder. At times he is subject to violent fits of colic, or to what he compares to cramp in the stomach, particularly after the bowels have been confined, after eating vegetables calculated to generate flatulence, or after exposure to cold.

In the other form, the general health suffers less: the pain and other local symptoms referred to the right hypochondrium are not complained of, but the patient is occasionally subject, particularly on exposure to the action of the causes before enumerated, to violent attacks of vomiting and pain in the belly, which are accompanied by the characteristic symptoms of intestinal obstruction. The circumstance that the immediate attack was apparently induced by some palpable and known cause, such as an error in diet, or exposure to cold, may here deceive the practitioner, and cause him to overlook the fæcal accumulation, without whose removal recovery cannot take place.

I and two other practitioners were several times deceived in the case of a gentleman of a robust constitution and great strength of body; and the true cause of the sudden and dangerous colics to which he was subject, was not discovered until he happened to mention that, when a young man, he seldom went to stool more than once a week. This led to the suspicion of an enlarged colon, and, ever since, the attacks have readily yielded to large injections administered by means of a Read's syringe, without which instrument he now never ventures to travel. The practical point that strictly claims our attention is, that the period of life at which the patient becomes subject to these attacks is often long subsequent to the cessation or diminution of the habit of constipation, and consequently the physician will not perceive the true cause of the complaint unless he questions the patient very accurately.

I believe that I was the first to call attention, in the fourth volume of the Dublin Hospital Reports, to the peculiar colour which the stools sometimes present, and to the cause of this change from their natural appearance; but Dr. Golding Bird, and others who have recently observed on this fact, omit all notice of my remarks. The first case which attracted my attention to this subject, was that of a gentleman who applied to me, labouring under the following symptoms:—he had been severely attacked last autumn by dysentery, then epidemic. The complaint, during its acute stage, was treated in the usual manner, and the febrile symptoms and passing of blood had ceased for many weeks; he had a good appetite and tolerable digestion, but was becoming daily more emaciated and weak. He had one or two natural stools daily, without tenesmus. He complained, however, of eight or ten sudden calls to stool during the twenty-four hours, attended with an impossibility of resisting the bearing down and weight felt in the rectum, so that the evacuation often followed before he had time to retire to the water-closet. These evacuations were preceded by no premonitory sensations, and consisted merely of two or three tablespoonfuls of muco-gelatinous matter, which varied in colour and consistence, generally resembling thick milk or puriform fluid, and occasionally a transparent tremulous jelly.

This fluid was evidently a secretion from the mucous membrane of the rectum in a state of irritation or sub-inflammation; such a condition of a mucous membrane constitutes the disease denominated chronic blennorrhœa, and when it occurs in the rectum, produces a disease, which on account of the white colour of the discharge, would formerly have been called *fluxus-cœliacus*,[*] and the evacuation attributed to the loss of chyle by stool, for the chyle was supposed to be formed but not absorbed or carried into the system. I should not have noticed this singular mode of explaining the whiteness of the evacuations, were it not retained by the late learned Dr. Good, in his *Study of Medicine*. In the June number of *Hufeland's Journal*, 1825, Dr. Rummel compares together the various descriptions of this supposed disease given by authors, and shows the mistake they all committed in believing that there was such a disease as *diarrhœa chylosa*, the existence of which he completely disproves.

That Dr. Good should have retained the old species *diarrhœa* *hylosa*, is less surprising than that he should have inserted a ew one, whose existence rests upon still more doubtful evidence. his new species he names *diarrhœa gypsata*, from the evacuaons, which consist of a matter resembling in its appearance a ixture of water and lime, which appearance he supposes actually ving "to earthy particles diffused loosely and separately rough the fluid with which they are discharged."

Dr. Baillie, who first described these peculiar white discharges, serves that they *seem, as to their colour*, to depend on a copious cretion of calcareous matter from the intestines; "*but that eir calcareous character has not yet been put to any chemical st.*"

As I have often seen stools of the colour here described, but which owed that colour not to the presence of lime, absence of bile, and a secretion of white viscid mucu intestines, I must reject this species of Dr. Good, at further evidence of its existence be adduced. If suc really exists, the earthy matter will probably be foun of phosphate of lime.

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[*] "Diarrhœa cœliaca, qua humor lacteus specie chyli dejicitur."—*Cullen's Nosology.*

Viscid and whitish discharges from the mucous lining the eyelids, bronchial tubes, urethra, vagin extremely common, and depend on a state of irritatio that which produces the white and scanty alvine arising from the mucous membrane of the rectum.

It is evident, from the case I have related, that ch tion of this part may produce much constitution When, however, the affection extends beyond the rec other portions of the large intestines, it occasions sy more urgent. That a similar state of the mucous lining the small intestines may occur, and give rise secretion from its surface, is proved by examinati contents, in persons who had died of the Asiatic many of whom white milk-like stools have been obse life. These stools were found on dissection to d secretion from the small intestines. The *diarrhœa all* by Hillary as occasionally epidemic in Barbadoes, pr from a similar cause.

It is unnecessary to detail the various remedie employed in the case above related, for the purpose this discharge from the rectum. None proved of a benefit, until at length I resolved to try strych authority of Dr. Rummel, who had employed the ex vomica with great advantage in this complaint. O a grain of strychnia, given in the form of a pill completed the cure in about three weeks.

Dr. Rummel observes, "that after endeavourin the original cause of the disease, the best remedies a combined with strengthening and astringent medi vomica possesses a peculiar power in controlling ble the rectum." In the cases he relates, Dr. Rummel astringent tonics, as sulphate of iron and calum medicines such as sulphur, which are known to exe action on mucous surfaces. The cure was in gener by the addition of soothing doses of hyoscyamus or opium. These means, combined with a judicious use of the nux vomica, will seldom fail to check the discharge, and restore the healthy action of the rectum.

Black or very dark stools may be caused, first, by an effusion of blood into the intestines, causing *true* melæna, which I have before spoken of in my lectures on fever; secondly, by black bile. The *atra bilis* was looked on as the only cause of black stools, until the nature of true melæna was pointed out by Hoffman, and afterwards by Home. The presence of black bile as the colouring matter of such discharges is acknowledged by Mr Abernethy. "The black colour of the discharge shows, I think, that the secretion of bile was not healthy, and that the liver was affected with the other chylopoietic viscera." It would, I think, be easy to prove that in the very case from which Mr. Abernethy draws this conclusion, the black stools did not depend on black bile; but on the *third cause* of such stools, viz., a secretion of dark-coloured matter from the mucous surface of the alimentary canal.

I shall not, however, contest this point, because Mr. Abernethy acknowledges, in another place, the agency of the cause whose existence I am contending for. "It seems probable," says he, "that the stools which resemble pitch are principally composed of diseased secretions from the internal surface of the intestines, since they do not seem either like the residue of the food, or discharges of the liver." After which he adds what appears at variance with his former opinion, "Can we suppose that all the black and fœtid matter which was discharged from the bowels in the first case was poured forth solely from the liver?"

In a very remarkable case I had under my care, and in which very great quantities of matter, sometimes of the consistence and colour of tar, and sometimes resembling ink, were passed by stool for ten or twelve days in succession, the black colour was evidently derived from the mucous membrane. A frequent examination of the discharges showed that this colour was not derived from blood; for it was quite evident that in such a case the blood could not have remained in the intestines very long after its effusion, for the stools were frequent and copious; and I know by experience that in true melæna, blood which has been retained even for a considerable time in the intestines will tinge water red, which was not the case here. In true melæna great debility and frequent fainting follow the evacuations if very copious; but in the case here referred to, and I believe in all others of a similar nature, the discharge of the black matter is followed by a feeling of relief to the system.

Mercury had no effect on the appearance of the stools, nor was there any symptom of hepatic disease; but a temporary improvement in their appearance always followed the internal use of stimulants, such as oil of turpentine, and the case finally yielded to the use of this and other stimulating tonic remedies. That the great quantity of black matter passed by stool was owing to an increased and vitiated secretion from the intestinal mucous membrane, was proved by the following experiment: I cleaned one-half of the tongue, from which I washed, with much difficulty, the black tenacious mucus. I watched it for several hours, and found that the part I had cleaned became gradually black and foul, the black mucus being evidently a secretion from its surface. Analogous to this case is one which was formerly under the care of Mr. Wilmot, and in which large quantities of blackish mucus were discharged *from the bladder.*

A patient who is at present in the chronic ward also presents some circumstances worthy of observation, as connected with peculiar varieties in the alvine discharge. She has been labouring for some time under melæna, and, as you have observed, passes daily a large quantity of dejections from her bowels as black as ink. I have already remarked that the colour of matters discharged from the bowels is subject to very great variety. In some cases they are clay-coloured or whitish, somewhat like barm; and I have seen them still whiter, and approaching the hue of milk. It is in cases of the latter kind, where the discharges are of a milky appearance, that persons, as I have told you, have been said to pass chyle, and their emaciation used to be attributed to a deficiency of nutriment depending on this cause. This, however, is not the fact: in some cases of chronic dysentery and diarrhœa, a fluid whitish discharge takes place from the rectum; but this is not chyle, it is only the changed mucous secretion of the irritated portion of the bowel. It is very curious to observe what different products the same set of secreting vessels will give rise to, according to the mode in which their vital action is affected. In other cases the discharges from the bowels consist of fatty matter, which bears a strong resemblance to wax, or adipocere. Again, we may have them of a very dark or even black colour, when, as I just now remarked, the colour may depend on one of three causes.

I have seen the stools quite black in particular forms of dyspepsia. Some time ago I attended a gentleman at Drumcondra, who exhibited this change in the colour of the intestinal secretions to a very remarkable degree. He was a very large man, accustomed to eat and drink very heartily, having, no doubt, a very capacious stomach and bowels, and a great quantity of fluids and solids. I mention this in order to give some explanation of the enormous quantities of this black fluid which he passed by stool and vomiting. After complaining for a considerable time of dyspeptic symptoms, he got an attack of vomiting; and as he drank freely of diluents during the act of emesis, the quantity of this black fluid which he threw up was amazing, indeed, I might say without exaggeration, he vomited by the gallon. With this he had eructations of sulphuretted hydrogen to such an extent, that it was almost impossible to remain in the same room with him. His tongue was as black as ink, and like the other case I mentioned, though frequently cleansed, resumed in a short time s former hue. He also passed an enormous quantity of the me stuff by stool. This matter I ascertained, by numerous servations and experiments, to be a secretion from the mucous embrane of the bowels, and not depraved bile, or blood changed the acid secretions of the bowels.

Melæna consists of a discharge of grumous blood from the testines, either with or without black matter. The following the way in which it occurs. Blood is secreted slowly into the ntestinal tube; while it remains there it is acted on by the acid secretions of the intestines, the effect of which is to change the colouring matter into black, and in this state it is passed by stool. The blood effused in melæna coagulates in the bowels, and being exposed to heat and air, turns black, and often becomes fœtid. When retained very long, the colouring matter may be washed away, and the coagulated fibrin left. In a dissection of a woman who died of melæna at Berlin, I found in the large intestines many hard balls, the size of apples, and *consisting of fibrin deposited in concentric layers*, evidently the result of successive

separations from the blood, effused during several d
attacks.

Again, there are other cases in which the discharges fr
bowels are found of a tarry and viscid consistence, and h
greenish-black appearance; this would appear to be co
with a vitiated state of the biliary secretion.

I have spoken here of three species of black discharge,
a different kind, and requiring to have a distinction made
them for practical purposes. Now, it is said if blood be
you can easily recognize it by putting a portion of the di
inclosed in a small linen bag, into warm water, whe
remaining some time, the linen will be stained of a
colour. If you take a portion of the tarry discharge, a
a little of it into water, it will communicate to it a y
stain. On the other hand, the black fluid, which con
vitiated mucous secretion, will not impart either a
yellow tinge.

I may further observe, that various substances used me
communicate a particular tinge to the alvine discharges.
acetate of lead, when it meets with sulphuretted hydroge
intestines, changes the stools to a black colour. Agai
of the salts of iron have the same property. Other sub
such as logwood, bilberries, &c., impart to them a re
while the continued use of chalk mixture is apt to rend
whitish or of the colour of pipeclay. This is apt to giv
suspicions of the existence of obstruction of the liver, an
instance I was deceived for some time by it myself.

With respect to the greenish coloured discharges, t
those which are most frequently met with, particularly
dren, and are therefore entitled to a greater degree of co
tion. There is nothing more common than to meet wi
of this green discharge during the period of infancy, and
to state that a great deal of error has prevailed on the
Greenish stools are generally looked upon as a sign t
child's liver is out of order, and as an indication fo
calomel. This, however, is by no means true; they
frequently depend upon irritation of the intestinal mucou
brane approaching to inflammation. The proper mode
ment here consists in adopting measures calculated to
irritability. In such cases warm baths, the application

facient liniments to the abdomen, the use of antacids, such as chalk mixture, the carbonates of soda and ammonia, small doses of laudanum, and hydrargyrum cum cretâ with Dover's powder, form the best remedies, and their operation will be very much assisted by a careful attention to diet.

You will sometimes, it is true, meet with greenish discharges in adults, but then they are not so fluid as those of children, nor are they attended with the same irritability of the gastro-intestinal mucous membrane. Here the best plan of treatment is the Abernethian: blue pill at night, and a mild aperient in the morning, which will be sufficient to correct the intestinal derangement, particularly if assisted by a well-regulated diet and exercise in the open air. But in children the greenish discharge is often of a much more acute character, and more closely allied to inflammation, or rather irritation; although in some cases it may go on for a considerable time without producing any acute disorganization.

It is on account of the property which calomel and other mercurials, exhibited internally, possess of causing irritation in the first instance, and if pushed farther, inflammation of the mucous nembrane of the intestines, that they are also apt to produce ischarges from the bowels, copious, fluid, and mixed with green ucous flocculi, resembling closely chopped *spinach*. Sometimes dejections consist of this green mucus nearly unmixed with thing else, and then they appear like semi-fluid boiled spinach. w, most practitioners think that this green colour is derived m the bile which the mercurial has brought down in unusually at quantities from the liver, excited to a more energetic act of ction. It has nothing to do with the bile in many cases, but ntirely derived from the irritated membrane of the intestines.

Before leaving this subject, let me call your attention to the owing singular case in which there were evacuations of blood m both the stomach and bowels, evidently caused by the itation of chlorine. It is that of Julia Casey, of phlegmatic nperament. She is a servant, and was attending her master, o died of cholera six weeks ago, and she remained in the use along with another female servant, considerably younger n herself, in order to clean the furniture.

The apartments were fumigated with chlorine, and although iged to remain in them, as before mentioned, they were directed to keep the windows and doors constantly closed, to render the disinfecting powers the more effectual. This was repeated day after day for some time.

From the first day she felt pain in the chest, with stuffing, choking, and tightness of the præcordial region which were very oppressive. Then she felt pain over the epigastric region, and could not bear to lay her hand upon it from soreness. These symptoms persisted for several days.

She describes very unpleasant sensations arising from the epigastric region, and passing upwards along each side of the sternum, and along the neck on each side of the trachea, and up into the head. She had great cough. This state continued for four or five weeks. Latterly she used to feel faint, and quite unable to continue working, if not permitted to sit a while in purer air.

One morning she was seized with sudden vomiting. A quantity of dark liver-like blood was thrown off her stomach, without much effort at straining. Shortly after she took castor oil, which she repeated immediately, and then passed some hard blood by stool, and vomited again black blood. This occurred several times during three days. The blood which was passed the latter part of that time was clearer and brighter than the earlier effusions. This pouring forth of blood relieved the præcordial oppression, and sense of suffocation, &c., nor had she any pain with these evacuations. During these attacks she was often senseless (this might be from the loss of blood merely, or it might result from the noxious influence of the gas); she did not cough up blood. The other servant, who was with her during the whole time, was frequently seized with coughing and spitting of blood. She complained often of stuffing in her chest and stitch in her side, with soreness. She took pills which checked the hemorrhage,—from her account they would appear to have been acetate of lead. Since admission she has only passed blood once by stool. She was insensible when they removed her. The surface of the body is exsanguineous; pulse very feeble.

Under the use of a mild diet and gentle aperients this woman gradually recovered.

In the commencement of this lecture I have alluded to the employment of magnesia as an antacid in derangements of the digestive organs. Formerly, when this medicine was more employed than it is now, its long-continued use not unfrequently caused the formation of calculi in the intestines. To prevent this, Sir James Murray introduced a preparation which he termed "fluid magnesia," in which the magnesia is dissolved in water by an excess of carbonic acid. That this had the desired effect is manifest from the extreme rarity of magnesian calculi in the intestines in the present day: but I think it right to mention to you, that *calculi in the intestines may follow the long-continued use even of the fluid magnesia.* I have seen two instances in which this occurred; one of them was in a highly intelligent medical friend, who has kindly favoured me with the following report:—

"For a considerable period, say two or three years, I was in the habit of taking, whenever I felt any dyspeptic symptoms, a wine-glassful of the magnesian water, as prepared by Sir J. Murray and Messrs. Thwaites, of Sackville Street; and during that time, whenever I got cold and became ill, I generally felt pain in the right iliac fossa, which, on taking medicine, disappeared.

"A repetition of these attacks required the use of leeches. The last attack, I think, occurred in March, 1843.

"I was sitting in my study reading, not feeling very well, when suddenly I felt very acute pain in the right iliac region, with a feeling of faintishness, upon which I went to bed, and had myself well stuped, and sent for Dr. Graves; but my condition being so very alarming, my wife sent in all directions for assistance, and in about half an hour there were five medical men beside me, who applied turpentine stupes, and as my skin had been well softened by the warm water I had used before they came, the torture I suffered was very great. I was soon after well leeched, and ordered a full dose of turpentine and castor oil, which remained ten hours in my stomach, when I threw the entire of it up.

"Writing from memory, I forget the detail of treatment, but having become convalescent, Dr. Graves advised me to take every morning a tea-spoonful of castor oil in warm milk, which I continued to take for some time, and to which treatment I entirely attribute the breaking up of the mass, though the existence of it was never suspected.

"Having made arrangements for going to England, I felt what I feared were inward piles, and sent for my lamented friend, the late Dr. Houston, who, after examination in consultation with Dr. Beatty, of Merrion Square, said I had fissure of the rectum, and urged the necessity of applying nitrate of silver, which he did, but the torture I suffered for ten hours after is not to be described.

"Without entering further into my condition then, I shall merely state that it was at that time I got rid of the lodgment. The anodyne I was obliged to take to allay my suffering at three different times after the application of the caustic, produced a great confinement of the bowels, so as to induce Dr. Houston to order me a very strong purgative draught, which effectually carried off the mass.

"On going to the night chair I perceived a most peculiar odour, which I conceived arose from the ulcer produced by the caustic, and the great pain of the matter passing over the sore. However, on getting up, I found that the discharge consisted of a multitude of round whitish bodies floating in a cream-coloured fluid, emitting a most peculiar odour, and one of them the size of a large horse-chesnut with the sharp thorns cut off; this I removed, and put into clean water. It was analysed by Dr. Aldridge. There was also a perfect grape, which must have been at least six months in the cæcum or behind the mass, as I distinctly remembered the last time I had eaten grapes, when that must have been swallowed whole; this I have preserved in spirits.

"The statement I have given will, I fear, be far from interesting; but the facts I desire to convey are—

"1st. That a deposit took place from drinking magnesia water, and which deposit settled in the cæcum, where it remained a considerable time.

"2nd. That during a very severe illness, in consequence, no doubt, of such deposit, I was ordered by Dr. Graves to take small doses of castor oil every morning, and which I am quite satisfied acted mechanically by insinuating itself between the bodies forming the mass, and which was finally carried off by a strong purgative draught, ordered by the late Dr. Houston, when under his care for fissure of the rectum.

"3rd. That since then I have never felt the same or any uneasiness in the right iliac region.

"4th. That I have never tasted magnesia water since, or felt the least disposed to do so."

Professor Aldridge has informed me that the specimen here luded to, which he analysed, was composed of *carbonate of agnesia* mixed with some animal and vegetable matters.

LECTURE LII.

DIARRHŒA.—DYSENTERY.—PERITONITIS.—ULCERATION OF THE STOMACH.—ENTERITIS.—HEMORRHOIDS.

HAVING lately used, with very considerable success, in the treatment of diarrhœa, a preparation first introduced by Mr. Kerr, of Glasgow, namely, the pernitrate of iron, I shall make a few observations here on its properties and use.

The combination of iron with nitric acid forms a remedy possessing tonic, and, at the same time, astringent powers, and hence peculiarly well adapted for the treatment of certain forms of chronic diarrhœa and dysentery. You will be consulted by females of a delicate and weakly habit, who frequently exhibit symptoms of nervous derangement, such as palpitations, sleeplessness, and headache, who are easily excited or alarmed, have a tendency to emaciation and paleness, and have little or no appetite. Combined with these general symptoms, you find that they have been labouring under diarrhœa, for weeks, and even months, and that this, with the other causes of debility, has rendered their condition exceedingly uncomfortable. You will also be informed by the patient that she had tried many remedies without benefit, and that she is extremely anxious to have something done to give relief; and hence it is a matter of importance to be acquainted with any remedy which may be likely to prove serviceable in such emergencies.

It would appear that this form of diarrhœa does not depend on an inflammatory condition of the stomach and intestinal canal, for the indications of inflammation are absent, such as pain, tenderness on pressure, thirst, redness of tongue, and severe or continued griping. It would rather seem to be connected with congestion of the mucous membrane of the digestive tube of a passive nature, and resembling the scrofulous; it is also of an unmanageable character, and very seldom amenable to the ordinary modes of treatment. The common astringent s totally fail; chalk mixture, kino, rhatany root, and are useless, and in such cases it has been observed that s generally injurious. If you prescribe opium it certainly the disease for a time, but this temporary relief is accom- by debility, malaise, restlessness, and many other uneasy ms, and the diarrhœa soon returns, and is as bad as

medicine which I have found most effectual in such cases ernitrate of iron. With it I have succeeded in curing ses which have been exceedingly obstinate, and of very able duration, the disease having in one case resisted all rts of medical skill for seven months, and in the other for rs. Seven or eight drops of the liquor ferri pernitratis, d gradually to twelve or fifteen in the course of the day, quantity prescribed in both cases. In the course of four slight diminution of the diarrhœa was perceived; in a t the patient felt much better, and in a month or five t had disappeared altogether. This took place without llowed by any bad effects; there was no swelling of the , no tympanitis, no tormina, restlessness, or nervous ment; the patients recovered their health and strength, cure was at once safe and permanent.

ffect of this remedy admits of an explanation on either of unds. You are aware that nitric acid exercises a very l influence over many morbid discharges. In chronic or dysentery, and in a certain form of diabetes, it is he most efficient and appropriate medicines which can be ed. We can, therefore, understand its peculiar adaptation se of which I have spoken. The nature of the complaint a tonic as well as an astringent; and you all know that id is used as a tonic in many cases attended with debility ciation.

respect to iron, its mode of action is equally intelligible. the salts of iron exert a very remarkable influence on litions of mucous membranes. The sulphate, tartrate, y other preparations are prescribed with great advantage ic fluxes from mucous membranes; hence the benefit so ly derived from the use of Griffith's myrrh mixture in ment of chronic bronchitis characterized by a supersecre- n the bronchial membrane, unaccompanied by fever.

You perceive, then, both the medicines which enter into
composition of pernitrate of iron are well calculated to c
morbid discharges and strengthen the tone of the system.
only objection to this remedy is, that it is apt to spoil: if
longer than a few weeks it is decomposed, and hence you sl
always take care to have it quite fresh when you prescribe
order to secure its full operation. Mr. Kerr, who was the
to introduce this remedy to the notice of the profession
published an interesting paper on its effects in the *Edin*
Monthly Journal for May, 1848. He gives a new formu
its preparation, and speaks highly of its employment in the
of enema. He states, also, that he has used it with much b
in several cases of urticaria.

I have lately had occasion to observe the good effects res
from a combination of nitric acid, with vegetable astringen
a little girl three years of age, in whose case I was con
by Mr. Wallace, of Townsend Street. She was of a stru
habit; her appearance was that of a delicate but not very
child, and, in spite of the long continuance of the complain
was active and lively, although her appetite was small. F
five times during the day, and six or seven during the
she was seized with a slight griping pain, and a sudden des
evacuate the bowels. Each evacuation was scanty, and con
of muco-fæcal matter. A great variety of the usual remedie
been tried—alterative doses of mercury, purgatives, astrin
opiates, &c. I prescribed the following mixture, which ha
happiest effect, and performed a speedy cure :—

℞. Decocti Hæmatoxyli, f℥iv.
Vino Rubri Lusitanici, f℥j.
Acidi Nitrici diluti, min. x.
Tincturæ Opii, min. v.
Misce, sumat cochleare unum medium quater in die.

You will recollect that nitric acid, when given in large
often produces diarrhœa, as in the common combination
drachm of dilute acid with a pint of decoction of sarsaparill

You have seen me employ the nitrate of silver in the cas
man above stairs labouring under phthisical diarrhœa:
now to offer a few remarks on the use of this medicine.
diarrhœa occurs in phthisis, you generally find it treated

exhibition of chalk mixture, with tincture of opium and kino; but this combination goes too far: it not only stops the diarrhœa, but also brings on the sweats in an aggravated degree. The nitrate of silver is much better; and nothing, in my opinion, arrests the colliquative diarrhœa which attends consumption in a more satisfactory manner than a grain of the nitrate of silver given three or four times a day. The nitrate of silver removes the diarrhœa without producing, like opium, any increased tendency to perspiration, and in this way is much more valuable than the former combination.

Probably the sulphate of copper would answer the purpose equally well. I speak not here of the diarrhœa which is attended with ulceration of the bowels, as in such cases the latter remedies are not indicated. I am persuaded, however, that many cases of diarrhœa, particularly in incipient phthisis, arise from what may be called *sweating of the bowels* (the colliquative diarrhœa of the ancients), and not from ulceration of the Peyerian glands, as supposed by most modern physicians, and that the skin and mucous surface of the intestines may alternately perform analogous functions. As to the diarrhœa which is connected with ulceration, and accompanied by tenderness of the abdomen on pressure, it is generally in the second and third stages of phthisis that it occurs.

We dismissed a case of dysentery lately from our wards concerning which I promised to make a few observations. During the months of August and September last, we had in Dublin several cases bearing a decided analogy to the dysentery of Cullen. There were fever, griping, tenesmus, a constant inclination to go to stool, without being able to pass anything but a little mucus and blood, and occasionally scybala. In this form of disease, some authors are inclined to attribute all the bad symptoms to the presence of these scybala, which are small hard lumps of fæcal matter, evidently formed in the sacculi of the great intestine. You will find others asserting that this cannot be the case; for in many dysenteries there are no scybala at all, and that even when they do occur, they have no connexion with the disease. The latter take no account of scybala, while the former state that the diseased condition of the intestine depends upon the irritation produced by them, and that you never can expect to cure the disease without getting rid of them by active pı For my part, I believe that there are certain dysenteric the great intestine, in which the main cause of the dise from the lodgment of quantities of hard, unhealthy, retained fæcal matter; but in cases of epidemic dysent not think that scybala have anything to do with the forı the disease, or the aggravation of its symptoms.

In the present case, the affection appears to have b rectile dysentery, depending almost exclusively on infla of the rectum, not extending to the sigmoid flexure of t and certainly never as far as its arch. The symptom were fever, increased heat of skin and quickness of puls feeling of heat and pain in the situation of the rectum first day the discharges consisted of mucus and blood, with fæcal matter; but after this, the mucus and bl voided alone, with great griping and tenesmus, and th was obliged to get up to the night-chair thirty time course of twenty-four hours. There was, however, no indicating that any portion of the intestine beyond th was affected. Now, what was the consequence of this things? The inflammation of the rectum gave rise to spasm of that organ: the colon partook more or le spasmodic action, and hence every attempt to pass tl was resisted. Here, however, the feces lay in a portic intestine free from inflammation; they could not pro aggravation of the symptoms, and the scybala were to l on as the consequence and not the cause of the diseas whether purgatives were given by injection or by th they would have done no good in such a case as this; have copious fæcal discharges, but without the slightest tion of the local symptoms. I do not mean to say th are not dysenteries in which purgatives are not highl but in the case before us, where the disease was limit rectum, I did not think that any benefit could be deri them. I confined my attention, therefore, entirely means directed to the part inflamed, applied leeches to gave narcotic and emollient enemata, and after I had in relieved pain and irritation, I combined with the enem a small quantity of the acetate of lead, with a view of the tone of the relaxed mucous membrane, and a changed it for the sulphate of zinc. Under this treatment the case went on very favourably, and we have been able to dismiss the man in a very short space of time.

With reference to the treatment of chronic dysentery, I wish to make a remark to you which is based on long experience, namely, *that meat is far too much refrained from.* I have found several cases which had obstinately resisted the most varied remedies assiduously employed, get well rapidly after a liberal allowance of meat was given; and at present, when called on to treat a case of dysentery of long standing, the first thing I do is to put my patient on full meat diet.

Let me now direct your attention for a few moments to a case which presents some interest, as connected with the obscurity of its nature; I allude to that of the young woman Moran. She came in on Monday week last, with symptoms of ordinary continued fever, for which the only remedies employed were effervescing draughts, diluents, and a proper attention with regard to diet. She had some headache, which went away a few days after her admission; and, as she made no other complaint, her case was looked upon as one of simple fever. Some time afterwards, it was observed that her abdomen was tympanitic, and that she had diarrhœa; but she persisted in denying that she had any abdominal pain or tenderness. In addition to this, symptoms of bronchial inflammation set in, but without any remarkable distress of respiration, or acceleration of pulse. She made no complaint whatever, and seemed extremely unwilling to communicate any information respecting her condition. Under these circumstances, all that could be done was to treat the symptoms as they became manifest, and accordingly, after having leeched the belly, I ordered a large blister to be applied so as to cover the epigastrium and lower part of the chest anteriorly. The only thing remarkable in her case, and to which I should have called your attention more particularly, was the repeated occurrence of rigors. It appeared from the account given by the nurse, that she had frequent attacks of shivering on last Friday and the two preceding days; and where this occurs, you should always suspect the existence of some local inflammation.

Such were the principal phenomena observed in this case.

On Saturday she stated that she felt better after the applicatio of leeches, and had no pain or tenderness whatever in the belly but still it was observed that the tympanitis was undiminished and that she was not by any means improving. This mornin she called to the nurse to assist her in getting to the night-chai when, after a few minutes, she was suddenly seized with a viole convulsive fit, and expired.

I may observe, that there was nothing in this case whic would lead one to suspect the existence of cerebral inflammatio The fever was of the ordinary kind; there was no remarkab acceleration of pulse (the number of beats in the minute bei only 84 when we examined her on Saturday); she had so headache, but this did not continue; and there was no flushi of the face, redness or suffusion of the eyes, heat of scalp, throbbing of the temporal arteries. There was nothing to infor us that disease was going on in the brain, and yet the patie dies violently convulsed. Under these circumstances, how we to explain the manner of her death ?

On opening the body, no trace of disease could be found the brain. The thoracic viscera were also healthy, with the e ception of some vascularity and congestion of the bronch mucous membrane. In the abdomen there were ample ma of extensive inflammation. The cavity of the peritoneum c tained a quantity of serous fluid; the intestines were glu together by lymph at almost every point of contact; and serous membrane was highly vascular. The mucous membr of the intestines was extensively inflamed, and there w numerous small ulcers in the situation of the glands of Pey The uterus, with its appendages, was in a state of intense flammation, and presented marks of recent delivery. It peared afterwards that she had been delivered of a male inf the fruit of an illicit intercourse, a few days before her admiss into the hospital. Under the influence of shame, and a de to conceal her condition, she had, throughout her illness, sisted in strongly denying the existence of any abdomi symptoms whatever.

Here this question,—whether the disease might have b cured had its true nature been discovered on her admission naturally suggested itself. I must candidly confess that I th it might; and I regret extremely that the peculiar circumsta of the case rendered her anxious to conceal the existence of the symptoms of abdominal inflammation; for had it been otherwise, a more active antiphlogistic and mercurial treatment might, perhaps, have been successfully employed.

This case affords an example of the effects which irritations of the periphery are capable of producing on the central portions of the nervous system; for here death was induced by convulsions, the immediate cause of which was situated not in the brain but in the abdomen. A very remarkable and striking case of a somewhat similar nature has been lately published by Dr. Ebermaier, in *Rust's Magazine* (Vol. 42, Part I., p. 52, et seq.), in which the abdominal irritation, caused by an enormous collection of lumbrici in the small intestines, occasioned in a child, who had previously enjoyed good health, a sudden attack of pain in the belly and vomiting, terminating speedily in fatal convulsions. The intestines were not inflamed, but were completely obstructed in many parts of the ileum, by successive round masses, formed by agglomerations of lumbrici, rolled up together, and enveloped in an adhesive paste formed of half-digested bread, cemented by a tenacious mucus. The worms were too numerous to count, amounting to many hundreds.

I shall next, gentlemen, proceed to speak of ulceration of the stomach, and first of that form of it where the ulceration is caused by abscesses from without making their way into that viscus. In the first case which I purpose bringing before you, the ulceration was caused by a hepatic abscess opening by three perforations into the stomach; it also burst into the pericardium. The case contains many particulars of extreme interest, among which I wish to direct your attention more especially to the physical phenomena produced by the simultaneous presence of ir and fluid in the pericardial sac, no instance having been hitherto recorded where similar symptoms, arising from ulcertion, extended to that sac, have been observed.

In order not to lengthen the case too much, I shall omit the etails of treatment: they consisted of local depletion in the first stance by means of leeches, and an attempt to mercurialize the stem, which attempt failed, because suppuration was in all probility established before it was made. My experience confirms e assertion made by Annesley and other writers on diseases of tropical climates, that it is impossible, or at least very difficult, to make the mouth sore to salivation, once the formation of abscess in the liver commences. Of course no practitioner, who is aware that hepatic suppuration has actually set in, will continue the exhibition of mercury; it then becomes injurious. In the following case, when suppuration was ascertained, poultices were applied, and various astringents were subsequently employed in vain, to check the diarrhœa.

Anne Walker, aged 25, spinster, of spare habit and nervous temperament, on Thursday night, 13th instant, without any assignable cause, was seized with a sudden and violent pain in every part of the abdomen, extending to the loins and back, unpreceded and unaccompanied by any other complaint. Was immediately bled, but without much relief; continuing in the same state, venesection was repeated the next morning with more effect; hot stupes were also applied. The entire of the 14th (yesterday) she remained in excruciating agony, applying the stupes, and obtained but little ease. She now lies on the back with the legs drawn up towards the body, unable to turn to eithe side, or stir in the least in the bed, without an insupportabl increase in her complaints. The pain she describes as of lancinating nature, sometimes resembling the pricking of number of pins, commencing at the epigastrium, shootin downwards to the pubis, and extending laterally into each hypochondriac and lumbar region.

Since the commencement of the attack she has been deprive of sleep, much annoyed with constant thirst, and a nauseous, disagreeable taste in the mouth. Her countenance is now anxiou and distressed; skin moist, and covered with slight perspiration tongue white and moist; pulse 128, small and somewhat wiry respiration 54; no morbid phenomenon can be detected in th chest; heart's action rapid, and sounds natural; the abdome is tense, hard, and exquisitely painful, the slightest degree pressure causing much uneasiness; bowels free; urine passed i regular quantities.

17th.—The greater part of the night was in a profuse persp ration; the pains in the abdomen generally not so acute; th are, however, still aggravated by change of position; the mout has become tender, and gums spongy; pulse 104, tolerably ful and easily compressed; respiration 40; tongue coated, and mois

18th.—Since the poultices were applied, the pains have been so far lessened, that she can extend her legs without their being increased; her countenance is not so distressed, and she appears more at ease; is at present in a profuse sweat; pressure on the abdomen still occasions uneasiness. In the right hypochondrium and epigastrium there is a considerable tumefaction, somewhat of a conical shape, affording, when pressed, a degree of elasticity and *dulness on percussion;* the pain produced in this part by pressure is very acute, whilst elsewhere it is comparatively slight.

19th.—The only part of the abdomen pained by pressure is that where the tumefaction was observed yesterday; it extends from below the ensiform cartilage to within a couple of inches of the umbilicus, also laterally occupying a space between three and four inches; and to-day a sensation of fluctuation is communicated to the touch.

20th.—A violent purging commenced yesterday, and continued the entire night; stools numerous, eight or ten, liquid, and of a dark colour, each being attended with griping and kneading; was much troubled with shiverings and pains in the back; her breathing is more distressed and accelerated, 44 in the minute; pulse 132, small and hard; tongue moist. No change has taken place in the appearances of the abdomen.

24th.—There has been no return of the purging since the 21st; the perspirations are diminished, and her general aspect is improved; she complains principally of pains in the back, continued and shooting upwards along the entire of the spinal column. When the tumor is now percussed, *it emits a tympanitic resonance;* the lower part of the left side also is very clear on percussion; *cannot now detect the fluctuation observable on the 19th;* the elasticity remains as before; pulse 116, soft, and improved in strength; respiration 30.

26th.—Was troubled with hiccough the entire night; had but little sleep, and sweated profusely; is quite free from pain, except in back and loins; has no appetite, but great desire for drinks; the tumor appears flatter, is free from tenderness, and still tympanitic when percussed; pulse 128, small, and soft; respiration 32; breathing regular. Tube of stomach pump to be passed into the œsophagus.

28th.—No air escaped after the tube was introduced; no change has taken place either in the size or sound of the tumor; bowels freed three times since yesterday, and stools attended with griping.

29th.—The tumor in epigastrium is considerably diminished in size, percussion elicits, as before, a tympanitic resonance, but does not extend as on the previous days to the right hypochondrium; her countenance is improved, and spirits not so depressed; breathing continues quick, and pulse rapid.

October 1st.—Purging has returned, with griping pains in the abdomen, and numerous liquid stools; the tumor in abdomen is scarcely perceptible, and but a slight degree of clearness on percussion can be elicited; the upper part of the tongue is extremely painful; on the dorsum there are two or three sores, the largest about the size of a silver penny; the others resemble fissures, and are separated from each other by septa; pulse 116, soft, and tolerably full; respiration 32.

2nd.—Purging remains unchecked; the tumor in abdomen has altogether disappeared; no tympanitic resonance is now afforded by percussion; the sides of the tongue this morning are covered with aphthæ; the sores on the dorsum remain the same.

3rd.—No effect has been produced on the purging; was upwards of six times to stool since yesterday; is much reduced in strength; countenance pale; pulse quick, 112; has great thirst; tongue dry, and not so sore.

6th.—Heart's sounds natural. Percussion and respiration over both lungs as in the healthy state; abdomen sunken and free from pain.

7th.—Bowels have been opened seven times within the last twelve hours; pulse 120; respiration 30.

9th.—*Was attacked yesterday with acute pain in the cardiac region, and last night had a violent beating of the heart, also a burning heat below the left breast.* She cannot recollect any cause to which she might attribute this. Her present state is extreme emaciation and debility, cheeks hollow, eyes sunken, countenance dejected, and spirits languid; her breathing remains accelerated, short, and distressed; the jugular veins, in the recumbent posture, turgid, but without pulsation; likewise those along the trachea.

Percussion over chest generally is clear, except at the inferior and middle portions of the left side. Respiration in these parts is feeble, elsewhere pure and loud; impulse of the heart perceptible, but feeble. About half an inch distant from the lower edge of the mamma both sounds are confused, and a slight bruit de soufflet is audible; advancing to the right, it increases in roughness, and below the mamma it becomes a complete creaking noise, accompanying both sounds of the heart, and is still louder between the sternum and breast; when pressure is applied it gradually increases these phenomena, and when considerable pressure is used, they are changed into a loud frottement, obscuring both sounds, the first especially; they are also rendered more distinct by holding the breath.

Abdomen smaller; purging stopped; pulse 130, small and compressible.

10th.—The phenomena are now audible as far as the middle of the sternum, over the cardiac region and laterally, being in each place of the same character. The sound is between bruit de soufflet and bruit de scie, in a great measure masking the first sound and accompanying the second, which still retains its clearness. Immediately under the mamma, together with these sounds, but heard only occasionally, *is a peculiar metallic click,* affording the idea of some fluid dropping in or about the pericardium; it is removed when pressure is made over the heart, whilst the other noises undergo a thorough change; thirst urgent.

11th.—Has not had a return of the pains in the left side; sweats every night as much as hitherto: had several shiverings ast night, after each of which she fell into a copious perspiration. Pulse 136, feeble; respiration 40; bowels regular.

Impulse of the heart is feebler; when the hand is placed over t, a rubbing sensation is communicated.

The sound to-day has assumed the character of an emphysematous crackling, is very fine, and obscures both sounds of the eart; is more distinct along the middle and inferior parts of he sternum, and can also be heard to the left of the mamma. *The metallic click, or apparently the dropping of fluid, observed yesterday, is more audible and distinct, but irregular in freuency.*

12th.—The irregular click, audible yesterday only at intervals, has now become *a loud metallic ticking, audible to each stroke of he heart* over those parts where the emphysematous crackling and other sounds were to be heard; it obscures all the phenomena hitherto noted, except a slight bruit de soufflet about the nipple of the left mamma. Impulse cannot be felt; is sinking fast.

13th.—Died last night at 10 o'clock.

Autopsy twelve hours after death.—Percussion over the front of chest afforded no evident dulness; over the cardiac region it was clear. When the sternum was raised, both lungs were found collapsed; the left in particular, which was found compressed by a quart of sero-purulent fluid. Weak adhesions connected both lungs with the external pericardium, and their inferior lobes with the upper surface of the diaphragm. The pericardium appeared enlarged, and a small quantity of fluid could be felt in it.

The abdominal parietes having been removed, the cavity of a large abscess was exposed, situated in the left lobe of the liver. Its form was circular, about eight inches in circumference, and bounded anteriorly by a portion of the parietes of the abdomen, and ensiform cartilage. Its posterior wall was formed by the remaining solid part of the left lobe; whilst the diaphragm superiorly was in immediate connexion with it, and the falciform ligament served as a means of separation between it and the right lobe; its thin edge was overlapped by a portion of the stomach; and near the pyloric orifice was an ulcerated circular hole, with rounded and smooth edges, about three-quarters of an inch in diameter, communicating directly with the abscess.

The stomach was intimately connected with the sub-surface of the left lobe by its concave margin; and near to its cardiac extremity were two other openings, one somewhat oval in shape, about half an inch in diameter, and connected with the abscess by means of a canal capable of admitting the tip of the little finger, and separated from the other by a thick band, evidently a portion of the stomach. This last perforation, or the one nearest the œsophageal extremity of the stomach, had no communication with the abscess. The surface of the abscess was irregular, presenting many depressions and elevations; its colour of a yellowish grey, its substance creamy, soft, and reduced by pressure into a pus-like fluid; when cut into it was at least three-quarters of an inch in depth, but does not retain the same thickness in every part; beneath, the structure of the liver is le, and in firm connexion with it the stratum of diseased ance, neither can it be separated from it.

here the diaphragm and pericardium are united, *is a perfo- n sufficiently large to admit the middle or ring finger, and ing directly from the abscess into the pericardium;* the s are ulcerated and uneven; and within the covering of the t are about two ounces of yellow-coloured fluid, mixed with s of lymph. The pericardial sac is increased to four times natural thickness, but appears equally dense in all parts; xternal surface is highly vascular; its interior is likewise med, dotted with numerous red spots, in some parts about size of a pin's head, and in others forming an arborescent arance; the surface has, in a great measure, lost its natural ening appearance, and looks uneven, being coated in parts small portions of organized lymph; and generally, particu- towards the origins of the great vessels, with small, granular, i-transparent bodies, resembling millet seeds, or the eruption etimes seen in cases of rheumatic fever; its feel is quite ty, but when these bodies are scraped off, the serous lining of pericardium is apparent underneath.

he heart itself is of a light red colour, and its investing nbrane is covered, like the pericardiac sac, with those glan- r substances, more abundant about the auricles and base of heart. Both auricles are bound down to the substance of heart, by means of strong, tough, and organized pieces of ph.

me tubercles scattered through the superior lobe of each . No adhesions existed between the peritoneum and intes- , or between these latter.

ncerning this case the following remarks appear necessary:—

rst; when the abscess burst into the stomach, the epigastric r which the abscess formed, did not at once subside, but enly, from having yielded a dull sound on percussion, me tympanitic and clear; air from the stomach having d its way into the cavity, while the pus escaped.

condly; the now tympanitic tumor seemed so exactly to nble the stomach distended with air, that we were induced ss a tube into the stomach, but it did not give vent to any

hirdly; in a few days the air also passed from the cavity of the sac, then all traces of the tumor entirely and un ably disappeared.

Fourthly; the diarrhœa was caused by the perpet of fœtid and irritating matter from the abscess into the i cavity.

Fifthly; no peculiar symptom, pain or derangeme functions, denoted the extensive ulceration of the stoma I shall again revert to this subject, when I have la you the details of two other cases of ulceration of the st

Sixthly; the inflammation spread by continuity of s from the abscess, to the pleura and pericardium *in instance.*

Seventhly; soon after the pericarditis thus formed l menced, and at the time that its usual physical ph were clearly perceived, a new set of physical phenome *dating from the moment the pericardium was perforated entered its sac.*

Eighthly; although most intense general peritoniti when the patient was admitted, yet no traces of general p inflammation were discovered on dissection.

Ninthly; it may be asked why I had not recourse to ation to let out the matter, as soon as fluctuation ha plainly perceptible in the hepatic tumor. My answer the tumor formed so quickly, and seemed to ten surface so rapidly, that I thought it better to wait f or two in order to render the operation safer, neve pating that the matter could, in so short a time, fin by another channel.

The next case is one in which an abdominal absces externally, and communicated also with the stomach.

Catherine Delany, aged 56, a washerwoman, was adm the Meath Hospital, on the 5th of May; she had a v abdominal tumor, which made its appearance about t previously, and was first perceived in the left hypoc region. It slowly, but gradually, increased in size, and appear to affect her health, for she was able to work few days before her admission. The tumor was glob uneven and rather solid, and was well defined in its occupying the whole of the umbilical, extending upwards inferior portion of the epigastric, and downwards into the

n of the pubic region. Laterally it stretched considerably
he right and left lumbar regions. It was quite movable,
lways fell towards the side on which she lay. It had lately,
ut lately, become painful and tender, particularly about
avel.

e length of time the tumor had been growing, its shape,
he absence of all constitutional affection, or local pain,
g so long a period, induced me to consider it as ovarian.
ly after her admission, matters began to wear a more
tening aspect; the tenderness and pain felt in the tumor
sed daily, and she now was troubled with frequent returns
usea, which, in the course of a fortnight, was succeeded by
nate vomiting.

e tumor began to grow red and softer in the umbilical
n, where a deep-seated fluctuation was recognizable, which
became quite evident and superficial, accompanied by heat
leep redness of the integuments, and a surrounding hard
in. In fact, everything announced a collection of matter
ly making its way to the surface. In consultation, it was
mined not to open this, for several reasons, the principal
hich was, that the long continuance of the local disease
ed to preclude all hopes of ultimate recovery: in the mean-
the pain, emaciation, and suffering of the poor patient in-
ed, and while the central softening of the tumor rapidly
essed, its circumscribed and solid structure towards the
nference as rapidly subsided, so that although the bulk
e whole was probably the same, its shape and prominent
rance were much altered.

e vomiting became more distressing, nothing was retained
stomach, large quantities of fluid, deeply tinged with bile,
thrown up for a week or ten days; about the 8th or 9th of
the fluid ejected suddenly changed its character, being now
k, viscid, and glairy mucus. On the 13th the tumor burst,
ontinued to discharge daily nearly a gallon of fluid exactly
r to what she had lately vomited. The external opening
tly communicated with the stomach, for the moment any
was swallowed, a portion of it was forced out through the
r. On one occasion a piece of orange, which she had
d and swallowed, blocked up the external orifice for several
. It is well worthy of notice, that notwithstanding the

deplorable ravages committed on her organs of digestion, and notwithstanding the existence of a perforation of her stomach, the tongue continued, throughout the whole of her illness, clean and moist! Again, when the perforation had taken place, the vomiting ceased, and although her most urgent sensation was that of thirst, yet she had a tolerably good appetite, which she sought continually to gratify by swallowing jelly, &c.!

She lived four days after the tumor burst externally, and but nine days after the occurrence of the perforation of the stomach. The external orifice communicated with a very large sac, the seat of the abscess, and formerly, in all probability, the sac of the tumor before it began to suppurate. This sac extended over the whole space formerly described as occupied by the tumor, and contained a considerable quantity of thick gruel-like fluid. No solid matter whatsoever was found within the limits of the tumor; nothing remained but the sac, thickened by inflammation, and adhering by pseudo-membranes to all the neighbouring viscera. The intestines and great omentum, matted together, formed the posterior wall of the sac, but on account of the diseased state of the parts it was impossible to determine with certainty, whether the anterior wall was formed by the peritoneum lining the abdominal muscles, or by the sheath of the recti. The former supposition seems the most probable, for a large portion of the surface of the liver was within the cavity of the abscess, and at its inferior edge was destroyed by ulceration.

The opening into the stomach was in its greatest curvature, and was distant from the pylorus about an inch and a half, and with the loss of substance in the liver, was the result of simple ulceration, without preceding scirrhus. All the intestines and viscera behind the tumor were, without exception, free from disease. I cannot conjecture in what structure this disease originated, or what was its nature at the commencement, but it may be doubted whether an operation for letting out the matter might not have prolonged, if not saved the patient's life, had it been undertaken at the time fluctuation first became perceptible, and before the ulceration of the stomach and liver had commenced. The details I have given you may possibly serve as a guide to others, should another such case occur.

The last case to which I mean to call your attention is one onic inflammation and ulceration of the mucous membrane stomach.

as requested by my friend Dr. Henry to meet him in con-ion on the case of a gentleman residing in Gardiner Street. patient was about fifty years of age, and had previously d good health. We could not ascertain the cause which iven rise to the disease, which lasted about two months, nating fatally. The symptoms underwent very little varia-and were accompanied by an extreme pallor of the skin. ad, indeed, very much the wax-like aspect of a person sted by repeated hemorrhage. He sank very gradually, g fallen into a state of extreme emaciation.

ne of the principal symptoms are described in the fol-g notes taken by Dr. Henry, and which I shall read for —"I find that I have not much to add to what you already of the case in Gardiner Street. You saw, yourself, the essive emaciation and debility; the total loss of appetite; satiable thirst—a thirst greater and more insatiable than I efore witnessed, lasting as it did during the whole course attendance. The eagerness with which the patient looked drink which was pouring out for him, and the impatience which he seized the vessel and swallowed its contents at raught, were the first circumstances which determined my sis of an inflammatory process going on in the stomach.

this case there was, *besides, a total absence of pain on food or drink, or from pressure on the region of the h, also an absence of vomiting*, except when it happened e patient had taken a large quantity of warm liquid. He en (and only then) sure to vomit; but he never threw up the solid food which he used to take in small quantities ime to time.

he patient occasionally hawked up a spit in which there ntained a small globule of rose-coloured blood of the size a; this globule of blood was entangled in the mucus, but t discolouring or streaking it.

e patient died from inanition.

ll the internal organs were healthy except the stomach. nterior of the stomach presented a dark surface when l. The portion surrounding the cardia, and the greater the large extremity, were almost quite black but without any appearance of large veins. The blackness was uniform, and seemed as if the substance of the lining membrane was deeply and permanently dyed with Indian ink. Around this black part was a circle of florid-red, gradually merging in the parts beyond, which were of the dark colour of ordinary melæna, with large black veins. Near the pylorus were two or three florid-red patches, evidently of superficial ulceration, with a defined hard-red border. They were of the size of a shilling or split bean. The pylorus itself was healthy. The patient derived most relief from repeated small draughts of iced water. No medicine was of the least service. It seems strange that in this state of the stomach sulphate of iron did not disagree."

In addition to these symptoms, it should be observed, that the patient's tongue was constantly parched. He slept, however, remarkably well during the greater portion of his illness, and the evacuations from the bowels were throughout *perfectly natural.* His belly did not exhibit at any time the least tumefaction, or the epigastrium any tympanitic distention; his pulse was in general about 94, and was not hard or wiry. Failure of strength and loss of flesh were amongst the earliest symptoms, and progressed steadily in a ratio beyond all proportion greater than could be expected, considering the quantity of nutriment taken and the well-digested appearance of the feces. The urine was quite natural, except in the beginning, when it was for a time tinged with blood.

In comparing the three preceding cases together, you cannot have failed to remark how few were the symptoms denoting any injury of the stomach in the two first, where the ulceration of that organ was, nevertheless, most complete and extensive; it would seem, indeed, as if the perforations, resulting from matter making its way through that organ, were accompanied by much less derangement of its functions, than a far less widely extended inflammation originating in the stomach itself spontaneously. The perforating process, intended to accomplish the evacuation of an abscess, must therefore be regarded as a curative effort of nature, wisely and beautifully so contrived that the steps necessary to insure the escape of the pus may be accomplished without endangering life or compromising the health of the stomach. If this be so, and it is scarcely possible to doubt it, we are presented with an additional example of the futility of *a priori*

ming, for surely no one who examined the extensive perfora-
in the stomach of the two first cases would have hesitated
ronounce that lesions of tissue so profound and extensive
t have produced a corresponding injury of function.

the third case it is well worthy of notice that many of the
ptoms reputed to be of most constant occurrence in gastritis,
absent. There was *no tenderness, no vomiting, no pain on
ng food, and no epigastric distention.* Neither did this
-continued and at length fatal gastritis ever give rise to the
mental aberration, or disturb the soundness of sleep. How
y reasonings and explanations of the *gastritic* origin of typhus
to the ground before such a case!

word or two before I conclude on the administration of
m in enteritis. I have already spoken of the salutary effects
is drug in certain stages of fever, and I would refer you to
remarks I then made as to the circumstances which indicate
employment. The following remarkable case of violent
ric inflammation, attended, as such cases always are when
dingly intense, with cholera-like collapse in the very onset
e disease, was saved by means of thirteen or fourteen grains
ium, given in the course of twenty-four hours, a plan of
ment which I first proposed, and which has since been very
ally adopted.

ttended the case with Dr. Nolan, whose servant the man
and I shall read for you his notes :—

n Monday evening, 27th February last, my servant Horan
lly complained of pains in the bowels; they had not been
on that day, and supposing it an instance of mere indi-
n, I ordered him five grains of calomel, and a draught of
oil. For that night I heard no more of him, but early
e following morning I was hastily summoned by one of his
-servants, who reported that he was dying. I found him
ring under severe but intermitting pain of the belly, par-
rly about the umbilicus, *violent and frequent cramps,*
ially in the lower extremities, and occasional vomiting.
surface was perfectly cold; features sunken; eyes sur-
ed by a dark areola: voice subdued to a whisper; pulse
mall and feeble; abdomen tender, though not at all tumid.
ld me he passed the night in great torture, and that the
s were still unmoved. I immediately ordered ten grains

of calomel, to be followed in two hours by an oil and turpentine draught, a turpentine enema, bathing, &c.

"Three hours subsequently:—temperature restored; cramps less violent; vomiting less frequent; but bowels obstinate; face and pulse equally unpromising as before; abdominal pain increased. I now bled him; but scarcely had four ounces been taken, when I was very glad to tie up the arm; the prostration alarmed me. Something, at all events, ought to be done, and I ordered a sinapism to the abdomen, a repetition of the enema (for I confess I had not much confidence in frequent or powerful purgatives), and a powder, composed of calomel two grains, opium a quarter of a grain, to be taken every fifteen minutes. Towards evening I thought my patient rallied a little; his countenance was better; pulse firmer; his abdominal pain not increased, and he vomited but once; the injection brought away with it a little mucus, but no more. I ordered the turpentine draught and the enema to be repeated.

"During the night there was just a trace of feculent matter, but vomiting returned, and I found him in the morning (the second of his illness) suffering an increase of pain; the abdomen, too, was not only extremely tender, but *decidedly swollen;* the pulse remained quick and weak as ever. I could not discover that he passed water. I bled him again, to as great an extent as I could, which was about eight ounces, and the cadaverous look, the cold clammy surface, in short, the absolute collapse which succeeded, and *continued for hours,* gave me strong reason to regret it. *It produced no impression* upon the pain.

"I had read with great interest the invaluable observations of yourself and Dr. Stokes, as well as the publications of Armstrong, Griffin, Gooch, &c., wherein the applicability of opium to certain modifications of abdominal inflammation is forcibly demonstrated, and I thought my patient precisely in the condition in which you would probably have had recourse to that powerful agent. I therefore commenced exhibiting half a grain of opium and two of calomel every half hour. After the second hour, I substituted for the calomel three grains of carbonate of ammonia, which with the opium as before I continued during the day and the whole night. In the morning (the third), I had the satisfaction of ascertaining that the pain and swelling had considerably subsided, and that the *bowels had been twice opened;* his counteance now spoke promisingly, and the pulse began to fall. I, owever, persevered in my plan of treatment for the day, and, ndeed, for the following nights and days (gradually increasing he interval between each dose, however), until all trace of pain nd obstruction had disappeared. The bowels continued to act rom time to time, although I never ventured upon another urgative; the dejections were at first largely mixed with blood nd mucus, but soon assumed every character of health. Of the equel (may be the consequence) of this interesting case, you most kindly undertook the management, and I shall therefore dd nothing to this simple statement of *facts*."

The first case in which I used opium in the treatment of eritonitis occurred in the old Meath Hospital in the year 1822; t was that of a woman in whom the inflammation set in after the peration of tapping for dropsy. The case seemed so hopeless, nd the agony which the patient was suffering so intense, that I as induced to order opium for her in very large doses; she also ot wine: to my great astonishment she recovered. I afterwards published, with Dr. Stokes, our conjoined experience the efficacy of this plan of treatment, in the fifth volume the Dublin Hospital Reports, to which I must refer you fuller details. Suffice it to say, that the use of opium in e form of peritonitis there described is now almost universally opted.

One of the young gentlemen attending here has asked me how ould treat an acute attack of piles. I will communicate whatever information I possess on the subject, and am always happy answering any inquiries connected with your professional suits. Of course I cannot enter into a regular disquisition the subject; this you will find in books, particularly those lished on the Continent, which follow up the consideration of norrhoids to an enormous extent. Our books here do not e much information on the constitutional symptoms which attendant on this affection; but in France, Germany, and ly a great part of their study is spent in investigating what stitutional diseases are connected with, or arise from, piles. hall pass over this, as well as the pathology of the disease, l the manner in which the rectum is affected; neither shall I ell on their divisions into those which are close to the anus and those high up in the rectum, &c., as you find them in various surgical works, and in Cooper's *Dictionary*, and shall only remark that the article on piles, in the last-mentioned work, is unworthy of the author.

I will proceed to the treatment of an acute attack at once. Suppose you are called to a patient labouring under an attack of piles, who is suffering very great pain, and, indeed, you cannot conceive how violent this may be; he is unable to remain quiet for a single moment; finds it almost impossible to sit down for any time; is perfectly sleepless, and screams with agony if you examine the state of the anus. The expulsion of the feces causes exquisite torture; you find him exceedingly miserable, and imploring your assistance. On your treatment of such a case much of your credit will depend; and yet I must say that I have seen persons of great professional character fail in procuring prompt relief.

Here the tumors are very much inflamed, the mucous membrane highly vascular, and the spasm of the sphincter great: omitting all surgical considerations, what are you to do? Apply a sufficient number of leeches in the first place. This will give relief; but do not rest satisfied with leeches alone. You will often have occasion to observe that their application has been attended with very little diminution of pain. If you do not see them followed by immediate benefit, make your patient sit over the steam of hot water, poured into a close-stool, for twenty minutes or half an hour, and make him repeat this five or six times a day. As soon as he rises from the close-stool, and before he lies down, apply a warm bread and milk poultice to the anus. You cannot conceive how rapidly and effectually this constant stuping and poulticing will relieve an acute attack. You should, in the meantime, give such medicines as will open the bowels, procure fluid stools, and diminish the engorgement of the rectum. That which I prescribe is the following electuary:—

℞. Electuarii Sennæ,
Florum Sulphuris, āā, ℥j.
Pulveris Jalapæ, ʒj.
Cupaibæ, ℥ss.
Pulveris Zingiberis, ʒss.
Bitartratis Potassæ, ℥ss.
Syrupi Zingiberis, quantum sufficit ut fiat electuarium.

f this a tea-spoonful is to be taken night and morning :
hur heats and determines to the skin ; bitartrate of potash
luces large watery discharges, and tempers the heat of the
hur; jalap quickens the purgative action, and copaiba
cises a powerful influence on the mucous surface of the
stines. We have an opportunity at present of watching the
ct of the latter remedy in the case of a man to whom we are
ing sulphur and copaiba, in disease of the mucous membrane
he lungs. This electuary opens the bowels, relieves the con-
tion of the mucous membrane, and determines to the skin
kidneys.

Vith the aid of this leeching, warm stupes, and poultices, you
quickly relieve an acute attack of piles ; and you may then
e recourse to an astringent lotion, we will say one composed
liquor plumbi subacetatus dilutus, six ounces, spirit of rose-
ry and tincture of opium, of each an ounce. This is to be
lied five or six times a day, and has a very good effect in
oving the relaxed state of the rectum. I have seen cases
ted in this way with marked success by Dr. Brereton, to
om I am indebted for this efficient treatment. I always
leavour to collect as much information as possible, and shall
ays feel happy in acknowledging the source whence it is
ived. I trust I have now answered the question put to me
one of the pupils to his satisfaction, and I hope the observa-
ns I have made will be found available in practice.

LECTURE LIII.

TAPE-WORM.—DISEASES OF THE LIVER.

There are two sorts of tape-worm which inhabit the human intestines; they differ remarkably in their appearance and anatomical characters, although bearing a general resemblance to each other. They are both made up of a number of flat pieces singularly articulated together; but in one—the *Tœnia solium*, the pieces or joints are comparatively long and narrow, with the oviduct opening on their margins; while in the other—the *Tœnia lata*, the joints are short and broad, with the oviducts opening in the centre of their flat surface. Now, these two varieties of tape-worm differ also in their geographical distribution; the tœnia solium is met with in England, France, Italy, Germany, and other countries in the south of Europe; while the tœnia lata takes up its abode in the intestines of the inhabitants of Russia, Poland, Sweden, and the northern countries of Europe; and either worm is very rarely met with out of its own district.

I have lately, however, had an opportunity of seeing the broad tape-worm in three individuals residing in one house in Hume Street, though not all members of the same family, as two of the cases were children of the owner of the house, and the third was in a maid-servant. It is this singular fact which induces me to mention the cases to you; the occurrence of this variety of tape-worm, so rare in this country, in members of the *same* family, might be accounted for on the principle of supposed identity of constitution, but it is difficult to account for its presence in the servant as well as in the children.

Oil of turpentine appears to be the best remedy for expelling tape-worms; it is usually given in large doses for this purpose, but I have sometimes found that it fails when thus given, while the continued use of it in small doses succeeds in expelling the parasite. Thus, in the case of the late Mr. Williams, the apothecary in Charlemont Street, ten drops given three times a day, d continued without intermission for six weeks, expelled a long pe-worm which had resisted the same remedy in large doses.

The electuary of tin too is in some persons an unfailing medy. In a case which I saw with Sir Philip Crampton and r. Pakenham, this remedy proved very efficacious. The following is the form in which it was prescribed:—

℞. Pulveris Stanni, ℥ij;
Theriacæ, quantum sufficit ut fiat electuarium, cujus
sumat quartem partem mane et vesperi quotidie.

This quantity was ordered to be taken daily for a week, and at the end of the week an oil of turpentine draught. He first took the medicine in March last, again in July, and lastly in October; on each of these occasions he passed several feet of tape-worm on the second or third day, and none afterwards. This gentleman had previously taken the decoction of pomegranate root and the compound decoction of aloes without any effect.

I shall next proceed to speak of some affections of the liver; and first let me call your attention to a case of inflammation of that organ terminating in abscess, and to the mode, which I was the first to point out, of opening abscesses of the liver. A robust man, by trade a glass-blower, was admitted into the Meath Hospital; he laboured under well-marked symptoms of acute inflammation of the liver. Although very active means were used, complete resolution of the inflammation was not induced, and four weeks after the subsidence of the first attack, the symptoms left no room to doubt the formation of an abscess in the liver. Hectic fever, attended with rigors, night sweats, and emaciation, being accompanied by a constant sense of uneasiness and weight in the right hypochondrium, which was evidently enlarged and harder than natural. It was also tender and painful at first, but after some time the pain became confined almost to one spot, which nearly corresponded with the centre of the external elevation.

Poultices were diligently applied, but although a very indistinct eeling of deep-seated softness was soon perceptible to the touch, et the abscess showed no tendency to point outwards. The xternal swelling remained stationary, and the integuments were f a natural colour. The man's constitution was now rapidly iving way, and it therefore became a most important question whether the abscess in the liver should be opened by an operation. To the performance of an operation it was objected, that the external tumor was very diffused, and, of course, the situation of the abscess quite uncertain, so that an operation afforded but little chance of giving exit to the matter, and if it failed, it might, for obvious reasons, prove very detrimental; any attempt therefore to open the abscess was disapproved of by the surgeons of the hospital.

Under these embarrassing circumstances it occurred to me that I had seen several cases where an incision made over a deep-seated abscess had failed from its deep situation to give vent to the matter in the first instance, and yet in the course of a few days the abscess found its way to the incision and burst through it, a process explicable partly by the removal of pressure, and partly by the inflammation arising from the incision, and which served to form a connexion between it and the abscess.

On these grounds I proposed that an incision about four inches long should be made exactly over the centre of the tumor in the right hypochondrium, that it should be carried through a considerable depth of muscles, and if possible be continued to within about one or two lines of the peritoneum.

This incision was to be plugged at its bottom with lint, and thus kept open, in the hopes that the hepatic abscess might for the reasons above mentioned tend towards, and finally burst through it. The operation was performed by my colleague, Mr. MacNamara. The abdominal muscles were found of considerable thickness and quite healthy, and although the incision was very deep, yet the situation of the hepatic abscess was not felt more distinctly, so that it now became quite evident that no prudent surgeon would have persevered in an attempt to open directly into it.

I now waited for the result with much anxiety. In two days after, the patient sneezed, and purulent matter in very large quantity burst forth through the wound. On examination it appeared that the incision had not been exactly over the abscess in the liver, for the matter did not come from the bottom, but from one side of the wound, and pressure on the liver to that side caused matter to flow in abundantly. The communication between the wound and the abscess was not therefore directly inwards, but somewhat laterally. If then we had attempted to open the abscess *directly*, we should have failed, and the consequence of such an attempt might have been fatal. Purulent matter, at first in large and afterwards in diminished quantity, flowed through the wound for several weeks, and the man perfectly *recovered*.

I have since used this mode of procedure in several cases, and it has been adopted by many others with much success. Its safety is a special recommendation, for it is in most cases very difficult to decide on the most appropriate spot for opening an abscess of the liver, and in some instances a distended gall-bladder has been opened by mistake, and caused death. Dr. Dick has employed in the East Indies a plan based on the same principles; instead of making an incision through the integuments, he destroys them by means of caustic, so as to ensure their sloughing, and he speaks most highly of the advantages he has derived in numerous cases from this mode of operating.

I will dwell no longer on this topic, but pass on to a very remarkable case at present in the hospital. If I were asked what was the most singular effect of medicines in the treatment of disease that ever came under my observation, I would say that it was in the case of a man you have seen in the upper ward, which has been noted by Mr. Costello, and forms a *tout ensemble* of disease which I have seldom seen paralleled. In the first place, he had dropsy, his legs were greatly swelled and anasarcous —no, the first symptom was, that he is an old man, and that is a bad item in the catalogue of his ailments; in the next place, he had not only œdema of the extremities, but also ascites, and very great enlargement of the liver; this organ was protruded forward in a remarkable manner, and you could at once feel its induration and rounded edge forming a large tumor, stretching far into both hypochondria.

On inquiring into the state of the digestive functions, you found that his tongue was parched, of a dark brown colour, and thickly furred; that he suffered from excessive thirst, nausea, occasional vomiting, griping, and diarrhœa, accompanied by discharges which were anything but healthy; that he had no appetite, that he was labouring under weakness, fever, ascites, anasarca, and, to complete this melancholy catalogue of maladies, old age; from such a combination of symptoms we looked upon his case as hopeless, and did nothing for two or three days, because it was one which required a careful consideration. We perceived that it was impossible to give him mercury, and besides that, the state of the liver did not indicate it. Now, what was the state of this man's liver? The nature of this swelling cannot at all times be easily distinguished from that which proceeds from hepatitis.

When hepatitis sets in with symptoms of jaundice and fever, you are aware of the nature of the disease, and you can cure it with mercury and bleeding. Again, you have a chronic enlargement of the liver, with pain at the top of the shoulder, and this you can remove by moderate antiphlogistic treatment, purgatives, and a cautious employment of mercury. But there is a change in the liver which is apparently like inflammation, and which is not hepatitis, but hypertrophy or morbid growth. You will, however, generally find that though in this case there is great enlargement, yet very little pain is felt, and you rarely find it accompanied by jaundice. I must confess, however, that I have seen a man in Sir Patrick Dun's Hospital, in whom a hypertrophied liver was excessively painful, and I am aware also, that it may be attended with jaundice. I endeavour to draw a distinction, but can only sketch it. They are, however, two diseases which require a very different treatment.

Cases of this disease resemble hepatitis, and cases of hepatitis put on the semblance of this affection, and it is only in extreme cases that you can draw a complete line of demarcation. The case before us is, however, a very good example of the treatment to be pursued, and this is the chief thing we have to consider. In those hypertrophied livers the substance of the organ is enlarged, without having any lymph thrown out, and you never find any abscesses. Mercury will not affect a liver of this kind.

In this instance, the principal remedial agent we employed was the hydriodate of potash. The first thing which suggested the use of this medicine in hypertrophied livers was the absorption which it was seen to produce in cases of goitre. We gave this man ten grains of the hydriodate of potash four times a day for a fortnight, and you have all witnessed the extraordinary improvement which took place in his symptoms. His pulse came down, his tongue became clean, the state of his bowels improved, and the dropsical swelling and enlargement of liver rably subsided. If, therefore, you meet a case of enlarged which you cannot clearly trace the symptoms to inflam-, and it presents analogies to the present one, you will the hydriodate of potash. We also used leeches to the When diarrhœa appeared, different remedies were pro- by gentlemen here. I thought leeching the best practice, e it would at once diminish intestinal irritation and lessen ngestion of the liver. French practitioners have discovered e diarrhœa of fever is safely and effectually stopped by ng a few leeches to the anus, and that this effect depends noving the intestinal congestion. In the present instance g produced immediate relief.

cases of chronic congestion of the alimentary canal and ement of the liver, I am in the habit of applying two s every second day to the verge of the anus, and I repeat metimes as often as fifteen times, and that with consider- enefit. Leeching to the amount of eight or ten leeches r twice is very different from this repeated application of a number; the former is adapted to acute inflammation— atter to chronic. You will also find that conium or amus, in combination with the hydriodate of potash, will bute materially to the patient's relief. Conium is a remedy is found to possess great efficacy in dissolving certain s. Baron Stoerk overrated its value, and thought it le of curing cancer. This is not the case; but still, in on to their narcotic effects, conium and hyoscyamus possess arkable discutient power. The following is the formula yed in this man's case:—

℞. Aquæ fontis, f℥j.
Hydriodatis Potassæ, gr. x.
Tincturæ Hyoscyami, fʒss.
Syrupi Zingiberis, fʒj.
Misce; fiat haustus quater in die sumendus.

uld you give opium in this case? Is there any difference en it and the narcotics we have used? I say there is, for impeding the action of the hydriodate of potash, it operates ously on those cases of hepatic disease. A few words ting another remedy, that is to say, the use of setons. I ed a lady with Dr. Ireland, who had seven distinct attacks of a liver complaint in the space of five months. She was jaundiced during each fit, and when the disease went away it left behind it an enlarged state of the liver, notwithstanding the repeated use of mercury. This was removed in some time by the use of a seton. I did not then know the medical virtues of the hydriodate of potash, or I might have cured the disease more rapidly.

Yesterday a gentleman called on me with a case sent for consultation from London. The patient, whose disease it describes, is now under the care of two eminent physicians, Dr. Elliotson and Dr. Johnson. His liver is greatly enlarged but not tender, and he is dropsical, although a young man. He has tried mercury in vain many months ago. Hydriodate of potash was ordered by his present attendants, and of course I concurred with them in opinion, having just witnessed its efficacy in the case before us. I also advised the insertion of two setons over the most swollen portions of the liver, having frequently seen hepatic engorgement and tumefaction, when become chronic, yield to the establishment of one, two, or even three setons.

In persons below thirty the liver may become enlarged to a very considerable extent, and yet return again to its natural size under proper treatment. I could point out several persons in Dublin, in whom the liver had been so much enlarged, that I thought their cases hopeless, and yet they have recovered, and are at present in the enjoyment of good health. The process by which the organ returns to its natural state and dimensions is generally slow; in two or three cases it occupied a space of time varying from one to two years. I attended a gentleman some time ago with Mr. Carmichael, and from the history of the case, as well as the symptoms present, we were induced to look upon it as incurable, and yet the patient has completely recovered. The late Mr. MacNamara and I attended a lady who had a very remarkable enlargement of the liver, but in the course of a year the viscus diminished so much in size, as to be very little above the normal dimensions. More recently Dr. Stokes and I have treated successfully an old gentleman between seventy and eighty years of age, who had an enormously enlarged liver and ascites. We agreed to try a combination of blue pill and hydriodate of potash. This he took for nearly six months, and its use was attended with a visible, almost daily, decrease in the size of the

, and his general health gradually improved. He took the for a couple of months before his mouth got a little sore; full salivation was not produced. He called on us a few s ago to thank us for our successful treatment, and took no l pleasure in directing attention to his altered appearance renovated health. This is a matter of no common interest; ases of this description have been generally looked upon as nd the reach of medical aid. You should, therefore, be very ful in your prognosis of such cases, and not give them up at as incurable.

wish now to make a few observations on a case of jaundice he small chronic ward. I do not intend to enter into any icular inquiry concerning the causes of this disease; you are re that it may depend upon many causes, upon affections of mind, gastro-duodenitis, inflammation or abscess of the liver, presence of gall-stones, diseases of the head of the pancreas, urism of the hepatic artery, and, what is more remarkable, in e cases may arise without any assignable cause whatever. he present instance it seems to have been the result of acute atitis. The man was attacked with symptoms of inflamion of the liver, and about a fortnight afterwards became ndiced. It is unnecessary for me to draw your attention to history of the case, or the present state of the patient; all n do at present is to make a few remarks on some points of tment.

n the first place, the jaundice is, as you perceive, of an nse character: the man is as yellow as he could be. Now I look upon as a favourable sign; the deeper the colour is recent cases, the greater is the chance of effecting a cure. re are no cases so intractable as those in which the tinge of owness is so faint that you would be likely to overlook it, as he case of a man in the chronic ward in whom the colouring o slight that it requires some attention to ascertain whether is jaundiced or not. Such a case as this is always of a onic, intractable character, and this is too frequently conted with a scirrhous state of the liver.

Again, in this man's case we cannot detect any appearance of in the evacuations; this is another good sign. When jaun co-exists with bilious stools, the prognosis is, generally speaking, bad. A but slight tinge of yellowness of skin, a the continued presence of bile in the stools, are two circu stances which I always look upon as indicative of an unmana able and frequently incurable affection. It generally depends a scirrhous state of the liver, or some organic derangem beyond the power of medical treatment. Again, another g sign in jaundice is, that as long as the bile is absent in the st it should be present in the urine. If a patient labouring un jaundice has clay-coloured stools, and you find on examinat that his urine becomes heavily laden with it, it is a very fav able circumstance; for it shows that, although the usual chan for the exit of bile from the system is stopped up, nature provided a remedy for the evil by establishing another emu tory.

You can understand, then, the reason of the anxiety I fel finding that this patient's urine was becoming paler and dimini ing in quantity, at a time when bile was not present in the sto In acute cases of jaundice, you should always bear in mind t patients will sometimes have a complete suppression of biliary discharge, followed by coma, without any symptoms disease of the brain. Why this occurs in some and not in cases we cannot understand, but, from whatever cause it m arise, we find that in some instances jaundiced patients bec stupid and lethargic, and die in a state of confirmed coma. such cases there is always very great danger, and where coma appeared as a prominent symptom of jaundice, you should alw give an unfavourable prognosis. I have never seen but patient recover under such circumstances.

On the other hand, it is equally curious that derangemen the urinary system is one of the most common symptoms disease of the brain. You will therefore understand the ca of my alarm, when I observed a diminution of the urinary se tion in this patient. As soon as I perceived this sympt though the patient had been taking mercury and was improv at the time, I immediately administered a diuretic, and I fortunately succeeded in producing a copious flow of urine. prescribed the following diuretic, which had been taken many hours when it produced a decided determination to kidneys :—

℞. Misturæ Amygdalarum, f℥viij.
Nitratis Potassæ, ℈ij.
Tincturæ Digitalis, min. xv.
Spiritus Ætheris Nitrici, fʒij. Misce.

f which a table-spoonful was to be taken every second hour.

There is one practical remark to be made on this and other milar cases. As soon as the symptoms of jaundice begin to ecline, and bile makes its appearance in the stools, you should tend carefully to the state of the patient, and note any mptom which may occur of an anomalous character. Now, in is patient's case, we observed that a degree of restlessness was esent, which terminated in a complete want of sleep. About e time when he began to manifest a degree of improvement, he ecame quite sleepless without any evident cause, and continued for two or three nights; and I have already stated in a former cture that, no matter when this symptom occurs, whether in ver or towards the termination of some acute disease, it always quires your attention. I therefore immediately took proper teps to restore sleep; and accordingly we find, on inquiring this orning, that he has rested well and feels much better. The an had been taking mercury, and his bowels were free; but, not ontent with this, I gave him a purgative consisting of infusion f senna with electuary of scammony. This he was directed to ke early in the morning, so as to secure its operation before ight; and about nine or ten in the evening, after his bowels ad been freely opened, he took a full opiate, which produced a ng and refreshing sleep.

As I have just alluded to the danger to be apprehended when ny nervous symptom arises in a case of jaundice, I shall illusate this view by introducing some very remarkable instances of is form of disease. The three following cases were sent to me y Dr. Hanlon, of Portarlington, and I hope that you will value s I do his communication :—

Case 1.—"Saturday, July 25, 1840, I was called to visit iss Maria B., aged 17 years. I was informed that she had een previously healthy. On the preceding Wednesday she omplained of languor, and in a few hours was attacked with ilious vomiting, which had returned three or four times in ery twenty-four hours since. When the vomiting commenced he became jaundiced, and the colour increased in intensity until it assumed a greenish-yellow tint. The bowels were constipated for two days before the vomiting began, and had remained so notwithstanding the apothecary in attendance had given he repeated doses of purgative medicines. Effervescing draught and other means intended to allay the vomiting had been give without success.

"I found the tongue thickly coated with a yellow mucus tenderness of the epigastrium and right hypochondrium, thirst abdomen not tender on pressure, urine scanty and high coloured, pulse 80, slight headache, pupils natural, complains want of sleep, and appears fretful and anxious.

"Calomel combined with compound extract of colocynth an croton oil internally, aided by purgative enemata, caused a smal dark, and offensive motion towards evening. Leeches we applied to the epigastrium and region of the liver, followed stupes, three grains of calomel every fourth hour, and a pu gative draught consisting of infusion of senna and tinctures senna, jalap, and cardamoms, after every second dose of calome

"Sunday.—Vomited twice since yesterday evening; the bilio matter of a darker colour; tongue still loaded; thirst dim nished; tenderness of epigastrium and right hypochondriu much less; bowels moved twice in the course of the night- motions larger but still very dark in colour; pulse 80; headac relieved; pupils natural; colour of skin the same; slept for tw or three hours in the night; same treatment continued.

"Monday morning, 5 o'clock.—I was called up in haste visit her. It appeared that two hours before my arrival s complained of violent headache and intolerance of light, vomit a dark brown matter resembling coffee grounds; soon afterwar became very restless, and gradually fell into a state of stupor. found her in imperfect coma, the pupils excessively dilated a insensible to light, the eyelids closed. She flung herself eve minute or two from one part of the bed to another, and utte a faint subdued scream; she was very unwilling to be interfe with; pulse 60, and oppressed; skin of a still deeper tint greenish-yellow.

"The assistance of Dr. Tabuteau and Dr. Jacob was procu in consultation. Fourteen leeches were applied to the templ the head shaved and cold cloths applied to it; twelve grains calomel in the first dose, and five grains every second hour aft wards; purgative enemata were employed every second hour. Cold affusion on the head was subsequently used to a great extent, but without producing any change in the state of the pupils or the coma; mercurial inunction in the region of the liver and insides of the arms was commenced, and a large blister applied to the scalp.

"At 11 o'clock a.m.—She was seized with violent convulsions, which lasted about a minute, and were accompanied by shrill screams; the right extremities appeared more strongly convulsed than the left, the mouth was drawn to the left side. The convulsions returned every thirty or forty minutes with the same violence and screaming, until three o'clock p.m., when they became less violent, but much more protracted in duration, and gradually passed into a continued spasm, or jerking of the extremities. She threw up occasionally a mouthful of the same dark matter which she had previously vomited. The administration of the calomel was relinquished, as every attempt to give it brought on a return of the convulsions. The mercurial inunction was assiduously continued, but no mercurial fœtor could be detected in the breath; the coma became more profound; the pulse rose to 108, small, fluttering, and finally intermitting; sordes collected on the teeth; the urine and feces passed involuntarily; the breathing, towards the close, became stertorous, and she expired at 11 o'clock the following morning. No examination of the body was permitted.

Case 2.—"Monday, March 29, 1841, I was requested to visit Miss Charlotte B., aged 11 years; sister of the former. She had been previously healthy; for the last two days has had the usual symptoms of a feverish cold, which are attributed to her having wetted her feet. I found the tongue loaded; tenderness of the epigastrium; none in the region of the liver; thirst; bowels confined; urine scanty and high coloured; pulse 120; no headache; pupils natural; no discolouration of the eyes or skin. Six leeches to the epigastrium, to be followed by stuping, purgatives, diaphoretic mixtures and diluents prescribed.

"Tuesday morning, 9 o'clock.—Appears better; slept some hours in the course of the night; tongue cleaner; thirst diminished; tenderness of the epigastrium much less; no tenderness on strong pressure in the right hypochondrium; bowels have been strongly acted on four times; motions dark and offensive; urine more copious and paler; pulse 92; no headache; pupils natural; no discolouration of the conjunctiva or skin.

"Having been absent from home during the day, I hastened, on my return at eight o'clock in the evening, to visit her, and was greatly surprised to find her in the same state as her sister had been. It appeared that about three o'clock she became heavy and languid, and the skin became slightly jaundiced. She complained of headache and intolerance of light; vomited a dark brown matter resembling coffee grounds; tossed about from one part of the bed to another; refused to answer questions, and fell into a state of insensibility; the bowels had been moved twice, the motions dark but not offensive. I found her in a state of imperfect coma, the eyelids closed, the pupils excessively dilated, and insensible to light; pulse 64 and oppressed; skin jaundiced. In a few minutes after my entering the room she was seized with violent convulsions, which were accompanied by shrill screams, and lasted about a minute. Pressure on the right hypochondrium appeared to give her pain.

"Upon my requesting that additional medical aid should be procured, her friends declined having it, on the ground that the case appeared precisely the same as her sister's, and all our efforts on that occasion had been unavailing. Under these circumstances I had recourse to the same plan of treatment as that adopted in the preceding case: cold affusion on the shaven head; ten leeches to the right hypochondrium; mercurial inunction on the right side and inside of the arms, in the intervals between the convulsions; strong purgative enemata frequently repeated, and a large blister on the scalp. The disease, quite uncontrolled by these means, pursued precisely the same course in every particular as the former one. The convulsions continued most violent for two hours, when they began to be less violent, but much more protracted in duration, until they passed into continued twitchings of the muscles of the extremities. The coma became more profound; the breathing stertorous; sordes collected on the teeth; and she expired at seven o'clock the following morning.

"Her friends, being now alarmed for the safety of her surviving brothers and sisters, became very desirous that the body should be examined. Dr. Tabuteau, who had seen the former case in consultation, assisted me in making the examination. The following are the results:—Examination made thirty hours after death; surface of the body jaundiced.

"*Head.*—Pacchionian glands preternaturally vascular; venous turgescence generally over the surface of the brain, with increased vascularity of the middle, and especially the left anterior lobes; substance of the brain much more vascular than usual; great vascularity of the choroid plexus; none of the optic thalami or corpora pyramidalia; the entire surface of the base of the brain highly vascular, particularly at the crura cerebri, pons varolii, and medulla oblongata; no fluid found in the ventricles.

"*Abdomen.*—Numerous spots of extravasated blood in the omentum; several small patches of inflammation along the small intestines; stomach apparently healthy.

"*Liver.*—Size natural; colour, externally of a dull yellow, with several dark spots about the size of a half-crown piece; consistence, less than usual; structure, minutely granular, and of a very peculiar crimson-orange colour, somewhat resembling what might be supposed to result from an intimate mixture of arterial blood and bile; gall-bladder distended with bile of the usual appearance. *Thorax* not examined.

"I endeavoured to preserve portions of the liver in a dilute solution of corrosive sublimate and diluted alcohol, but they gradually lost their characteristic appearance in both fluids.

Case 3.—"Friday, June 18, 1841, I was called to visit Miss Jane B., aged 8 years; sister of the two former. I was informed that she had been previously healthy. This morning she appeared languid, and was attacked with bilious vomiting. No cause can be assigned for her illness. I found the skin jaundiced slightly; the tongue loaded; tenderness of the epigastrium and right hypochondrium; thirst; bowels confined; pulse 108; no headache; no intolerance of light; pupils natural; urine scanty and high coloured. Eight ounces of blood were immediately taken from the arm, which afterwards proved to be cupped and buffed; eight leeches applied to the region of the liver, followed by stuping; twenty grains of calomel given at once, and a strong purgative draught every fourth hour until the bowels are fully acted on; three grains of calomel and one and a half of James' powder every third hour after purgation; cold to the head.

"Saturday.—Slept none; skin more deeply jaundiced; tenderness of the epigastrium diminished; heat of the right hypochondrium still remains; tongue yellowish; vomited twice since yesterday evening; urine tinged with bile and more copious; bowels moved four times; motions dark and offensive; pulse 110; headache and some intolerance of light; considerable restlessness. Six leeches to the right side, four to the temples; cold to the head; a blister to the nucha; mercurial inunction five grains of calomel and one of James' powder every thir hour. I now watched the case with the greatest interest an anxiety.

"Sunday evening.—Slight mercurial fœtor of the breath tongue beginning to clean; tenderness of the right sid diminished; bowels moved three times; motions less dar and offensive; pulse 90, and soft; headache and intoleranc subsided; restlessness entirely gone; some return of appetit Calomel and James' powder were continued every fourth hou until a slight salivation was established, and cold carefull applied to the head. No unfavourable symptom subsequentl appeared. The tongue became clean, the pulse fell to th natural standard, the motions became more healthy in appea ance, the appetite returned, and under the use of four grain of calomel at night, and a strong dose of black draught th following morning, repeated every third night for three week the jaundice disappeared, and she has remained quite well u to this period."

The next case to which I shall call your attention was one jaundice arising from inflammation of the gall-bladder, in whic nervous symptoms also occurred and were followed by death; is that of Anne Milton, a healthy, fine young woman, aged (servant), admitted into the Meath Hospital November 1 About five weeks ago was attacked with pain in the right hyp chondrium, extending into the epigastrium, which lasted for fortnight, and was followed by jaundice and high-coloured co dition of urine. She does not recollect whether the feces we whiter than usual. After the skin got yellow the pain in t side diminished; but during the whole time it lasted she h constant vomiting and nausea. Three days after the setting of pain, and ten before the appearance of the jaundice, she l came affected with excessive itching of the skin, which prevent ep: *this itching ceased as soon as the jaundice appeared.*[*] .e had no pain in either shoulder. At the time the skin came yellow, an eruption of an herpetic character appeared er the hepatic region. She was under no treatment for the in; but to the eruption a mixture of gunpowder and blood is applied.

Present symptoms.—Skin and conjunctiva deeply jaundiced; l objects appear yellow; urine high coloured; feces white; ı itching of skin; the linen over the eruption is stained llow; tongue clean and moist; great thirst; appetite good; omach not sick; no pain after taking meals; bowels confined; eeps badly; no headache; pulse 80, full and soft; breathing urried; no cough or physical sign of disease in either lung; e heart's action strong, but the sounds are normal and dis-ıct; complains of no pain when the right hypochondrium is essed, or when the ribs are pushed against the liver, *but she 's slight pain at a point between the right hypochondrium and igastrium, greatly increased by pressure.* There is some lness of the latter region, but percussion does not give a dull und; no enlargement of the liver noticeable or detected by rcussion; the abdominal muscles are very irritable, and are 'own into spasms by the least effort to examine the abdomen ıntely; she has no pain over either lumbar region. Poultices he eruption; twelve leeches to the painful part.

℞. Pilulæ Hydrargyri, gr. x.
Pulveris Ipecacuanhæ compositi, gr. v.
Misce et divide in pilulas tres, sumat unam quartis horis.
Adhibeatur enema purgans.

ovember 5th.—Pain relieved by leeches; no other change; etite extremely good.

ovember 6th.—Was attacked last night with pain in the nach; no vomiting; pulse to-day fuller and quicker, 100; athing not hurried; "feels unwell" to-day; tongue clean; ıe thirst; appetite good; bowels confined; skin dry; no change in the jaundice; complains of tenderness at the point before mentioned. To take five grains of blue pill three times daily. Twelve leeches to be applied to the epigastrium.

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[*] The same phenomenon was observed in a man named Jones, who laboured under most severe jaundice; in whose case the itching preceded the appearance of the dice for two months, and discontinued on the discolouration of the skin becoming blished. These two cases are irreconcilable with the generally received opinion, the itching depends on the deposition of the constituents of the bile in the ure of the skin.

November 7th.—On the previous evening she became delirious, and this morning (7th), at the hour of visit, was quite comatose, and soon after died.

Post-mortem.—The brain and abdominal viscera were the only parts examined. The liver was not by any means enlarged, and a section of it disclosed no excess of blood. It was of a light brown colour, tinged with yellow, as if from a superabundance of the colouring matter of the bile. The gall-bladder was distended, and on being opened was found completely filled by a dark green mass of a tenacious viscid nature, apparently lymph. This substance was of the same pyriform shape as the gall-bladder, and terminated by its narrow extremity at the commencement of the gall-duct. On its removal, the lining membrane of the gall-bladder presented a bright scarlet colour and villous appearance, and the natural and beautiful "honeycomb" arrangement of the mucous membrane was completely effaced. There was no softening or ulceration of the membrane, nor was the colour different in any part. It resembles very much the appearance of the mucous membrane in acute laryngitis. The walls of the gall-bladder were much thickened. There was no obstruction of the ductus choledochus, the cystic or hepatic ducts, and their lining membrane was quite free from any unusual vascularity; the duodenum and stomach were stained with the colouring matter of the bile, but in other respects were healthy; no gall-stones or other obstruction; the kidneys were natural.

Cranium.—The dura mater was stained of a yellow colour; there was no thickening nor opacity of this membrane; the arachnoid and pia mater were quite healthy; the substance o the brain was firm and free from any unusual vascularity; no effusion of lymph in any part; the ventricles were not distended with fluid beyond what is normal, but the fluid, though in smal quantity, was of a yellow colour, and the surface of the differen parts contained in each ventricle was also of a light yellow colour; the nerves and all other parts of the organ were free from this staining.

It may not be deemed superfluous to mention here the details of a case which was lately under the care of my esteemed colleague, particularly as it required some skill to distinguish the features which it presented from the ordinary and so frequently fatal combination we have just spoken of. An old woman was admitted in September into the Meath Hospital, labouring under jaundice, purpura hæmorrhagica, and palpitations of the heart. Her habits were very intemperate, and shortly before admission she had been indulging largely; and when first seen by Dr. Stokes, she presented, in addition to the symptoms already enumerated, many of the features of delirium tremens. She was exceedingly feeble, and her legs were anasarcous. After being under treatment for some time she began to improve; when one night she was attacked with violent delirium, convulsions, and imperfect paralysis of the right side, she lost the power of speech, and the mouth was drawn frightfully to the left side.

The face presented almost all the phenomena which attend Bell's paralysis of the portio dura, *but the head was cool, she complained of no uneasiness in this region ; the eyes were quite natural, and no increase in the strength of the pulsation of the carotid or temporal arteries could be detected. She lay sobbing and frequently sighing*, and appeared extremely anxious to excite the sympathy of the spectators. These circumstances induced Dr. Stokes to make a most careful examination of the patient; and having premised to the class that the case differed in many particulars from the ordinary combination, and that should it appear that there was really a connexion between the jaundice and the supervention of the cerebral symptoms, the prognosis ought to be most unfavourable. He ascertained after some time, from the nurse and the other patients, that this woman, though fifty years old, was extremely hysterical, and had, during her sojourn in the hospital, many attacks somewhat similar, though much more mild; and by a further reference to her husband, it was discovered that she had been subject to these hysterical attacks for the last thirty years, and that she had frequently been affected with convulsions, raving, and even temporary paralysis, for years before the occurrence of the jaundice.

The nature of the case was then quite evident, and the patient was saved the risk which might have attended the employment of remedies the supposed complication would have indicated. It may, with truth, be said, that this was a very unusual combination; but it shows, in my opinion, the necessity of patiently investigating and carefully scrutinizing the characters of any rare or hitherto unnoticed symptom, or combination of symptoms, in any particular case; for who might not have mistaken the cerebral symptoms in the example before us, for the common complication which occurs in jaundice?

DISEASES OF THE KIDNEY.

LECTURE LIV.

BRIGHT'S DISEASE.—DIABETES.—CARBONATE OF AMMONIA IN THE URINE.—RECTO-VESICAL FISTULA.

T me first direct your attention to-day to the case of a man med Murphy in the chronic ward, who came in with bronchitis ompanied by anasarca. He had old bronchitic cough, copious ectoration, and orthopnœa ; but he had no symptom of disease the heart ; his pulse was regular and rather slow, he had also uminous and scanty urine, but without any fever, thirst, or usea. The recent origin and sudden appearance of the disease uced me to look upon it as a case of acute dropsy, and I com- nced the treatment by antiphlogistic measures, which, as you y have perceived, have been followed by remarkable benefit. hat I wish to call your attention to particularly in this case the state of the patient's urine. On his admission, we found t his urine was highly albuminous; when submitted to the ion of heat at the temperature of 170° it coagulated rapidly, l showed distinct traces of the presence of a large quantity of umen. Yet, under the use of opium in moderate doses, this n's urine became in two or three days perfectly free from ry trace of albumen, and has continued so ever since.

ow, this case alone would be a sufficient refutation of the ions of those who look upon albuminous urine as a pathog- nonic sign of disease of the kidneys as described by Dr. ght, and who are in the habit of marking such cases in the pital as cases of "Bright's Kidney." It appears rather nge, as in our case, that a man should have "Bright's dney" to-day, and not have it the next day. We have had a at many instances of this kind; and in various cases which ne under our treatment in this hospital, I have shown that s state of the urine may depend on mere functional disease of the kidney. Indeed nothing is more common than to meet albuminous urine in the dropsy which succeeds scarlatina, and yet most of the patients perfectly recover. I had lately an opportunity of examining the kidneys of a boy named William Young, who was admitted into Sir Patrick Dun's Hospital on the sixth day from the commencement of anasarca after scarlatina. This boy's urine had a specific gravity as high as 1027, and contained an enormous proportion of albumen. He died suddenly of convulsions the fourth day after his admission. His kidneys were in every respect healthy.

One word with respect to the diuretic remedies, which in this case I have employed with remarkable success. Having removed the acute symptoms by antiphlogistic treatment, I prescribed the following decoction:—

R. Decocti Hordei, fʒxvj.
Sacchari Albi, ℥j.
Nitratis Potasse, ʒij.
Acidi Nitrici diluti, fʒj.
Spiritûs Ætheris Nitrici, f℥j. Fiat mistura.
Two table-spoonfuls to be taken every second hour.

This is an excellent mixture, and well suited to the stage intermediate between the acute and chronic form of dropsy, where you wish to excite the action of the kidneys, and are afraid of stimulating the system generally. It has acted very favourably in the case before us, having increased the urinary discharge very considerably, without producing any constitutional excitement.

We have recently had another case in the Meath Hospital, in a man named Connell, which afforded us an example of the fallacy of albuminous urine being in all cases a symptom of the disease of the kidney described by Dr. Bright. This man was about fifty years of age, of intoxicated habits, and died from the conjoint effects of consumption and dropsy. The right kidney, on being cut into, appeared pale and granular; it was of the natural size. The left was one of the best specimens I had ever seen of what is designated *Bright's Kidney*. It was hard and very small; the capsule came off readily, and the surface of the kidney then appeared rough and nodulated, indicating the latter and more confirmed stages of the disease. There had been five examinaf the urine made while he was in hospital; it was ascer- to be healthy, and had no trace of albumen.

coincides with many observations that I have made, and ears to me very doubtful whether the pathology of this , as laid down by Bright, Christison, Rayer, and other uished physicians, will be found consistent with the cases daily occur in practice. The latest and most elaborate which has appeared upon the subject is from the pen of ebrated Rayer, who has brought forward a great number , but he seems to me not in every instance to have been by logical precision in his inductions. Without question- accuracy of his observations, I feel myself called upon to against several of his conclusions, and cannot help feeling s treatise exhibits internal evidence of inconsistency. The scope and object of his work is to account for certain oms, by showing that they are caused by a morbid change structure of the kidneys, which he terms albuminous tis. The investigations of the morbid anatomist, when ately pursued, lead to positive facts, not liable to be mis- reted or confused, and which ought, in every instance, to died of and for themselves. The results of such investi- s should be positive and palpable, for, in order to estimate al nature of the changes observed in any organ, an obser- is worth nothing, unless what we see in the dead body tly discloses the nature of those changes.

it seems to me that morbid anatomy will become of very onable utility, if we permit ourselves to interpret the ances observed in any organ, not by considering the actual es it has undergone, as proved by dissection, but by a nce to the symptoms during life. Such a mode of proceed- ust necessarily lead us from the true object of morbid ny, inverting the hitherto received method of that science, g us explain *structural changes by symptoms, and not oms by structural changes.*

t Rayer has fallen into this inverted and illogical method, ent from the following statement made by himself:—

here are several striking analogies between simple nephritis lbuminous nephritis. Both are alike produced by the sion of cold and moisture. In the acute stage, with the ion of pus (which is exceedingly rarely, if ever, met with in the albuminous disease), they have everything in common, the injection of the parenchyma of the kidneys, the increase of their bulk, the yellow discolouration of their substance, &c. In the chronic stage, when this is far advanced, the lesions are so similar, that without various circumstances drawn from the course of the diseases, from the presence or absence of dropsical effusion, and of albumen in the urine, it would be impossible to distinguish the one from the other."

From another passage it appears to me, that an inference very different from that Rayer draws, may very legitimately be deduced. The passage is as follows :—

"But, on the other hand, some strong points of dissimilarity separate the two morbid states; and one of the most striking o these is, without doubt, the marked influence which diseases of the urethra, bladder, prostate gland, ureter, and pelvis o the kidney have on the development of simple nephritis, while they seem to exert little or none on that of the albuminous kind."

Now, from these passages combined, it appears that the knif of the anatomist reveals nothing absolutely distinctive between common and albuminous nephritis, and consequently we may be permitted to doubt whether any real difference actually exists between them ; nay, it seems almost positive, and established by Rayer's confession in the second passage, that the alleged abnorma condition of the kidneys is entirely unconnected with the supposed attendant alteration in the urine; for his confession is very remarkable, that where causes merely local induce this particular change of renal structure, that change is unaccompanied by the alteration in the urine. All the rules of sound logic, therefore, would lead us to suspect that when such changes in the urine do occur, they arise from some other cause than the renal disorganization. This suspicion is confirmed by the fact, that Bright and his followers have, as I have observed on a former occasion, accounted for changes in the urine, which are nearly identical in the acute and chronic albuminaria, by lesions of the kidney widely different from each other.

In acute albuminaria the general characters of the urine are not much changed, but it is loaded with albumen, occasionally mixed with the colouring particles of the blood, while in chronic albuminaria the albuminous admixture still continues, but the e is diminished in specific gravity, and its urea and salts ed in quantity. In both, however, the leading characteristic ge in the urine is the presence of albumen; this alteration lleged to be permanent through the disease, and yet when accurately examine the described alterations which the ey undergoes from the commencement to the end of the ady, they are so strikingly different from each other, that it xtremely difficult, if not impossible, to assign the same parlar alteration of the secreted fluid to structural changes in secreting organ, so different, nay, so opposed to each other. ns M. Rayer describes six forms of structural changes.

irst form.—The size and weight of the kidneys are considery increased from four ounces, their ordinary weight, to eight or n twelve ounces; their consistence is greater, but is not inated; their surface presents a morbid red hue, and appears tted over with a number of small red points of a deeper ur than the rest of the organs. On making an incision into kidney, we find that increase of bulk is owing to tumefaction its cortical substance, which exhibits numerous red spots ilar to those visible on the surface, and which, according to er's researches, correspond with the glands of Malpighi hly injected with blood. The tubular substance of the kidney f a duller red, and its striæ are less apparent than in the lthy condition. The mucous membrane of its pelvis and ces is sometimes injected, and exhibits vascular arborization its surface.

he sixth form.—This corresponds with the third variety cribed by Dr. Bright. The diseased organ is sometimes er, but often smaller than in health; it is hard, and more or irregular or tuberculated. We observe few, or perhaps none ll, of the milky spots or granulations on the surface of the cted kidney; but a certain number are always found, when incision is made into the cortical substance. The surface of kidney is indurated, corrugated, and mammillated; but, ough sprinkled over perhaps with minute asperities, it does exhibit the genuine granulations of Bright. *In some cases, ust be confessed, that the anatomical forms of the disease are losely alike to those observed after simple chronic nephritis, it would be scarcely possible to point out the distinction veen them, if we did not take into account the phenomena* *present during the life of the patient!* In this advanced stage of the disease the investing membrane of the kidneys is always thickened, at least in several points, and strongly adherent.

Now, any one who carefully examines kidneys affected with structural changes so different, and in every physical quality of their tissue so opposed, will feel great difficulty in believing that one and the same effect can be produced by both on the renal secretion, viz., the appearance of albumen in the urine.

At present I have not time to assign my reasons for dissenting from M. Rayer in several of the propositions he lays down in the course of his work; but one assertion of his is too manifestly inconsistent with the facts to allow it to pass unnoticed. Endeavouring to establish a means of diagnosis between dropsy caused by disease of the heart and that arising from albuminous nephritis, he says that the dropsical effusion caused by disease of the heart usually commences in the lower extremities, and extends upwards, whereas that arising from the lesion of the kidneys is often first perceived in the face. I have no hesitation in asserting, from the result of my own observations, corroborated by that of Surgeon Adams, and borne out by the testimony of Corvisart, that when disease of the heart occasions dropsy, the most usual site of the first anasarcous swelling is the face, neck, and upper extremities. But the doctrine of Rayer, thus liable to a valid objection, deduced from general reasoning, will not stand the test of facts; for the whole basis of his theory falls to the ground, if, in a single instance, we find the structure of the kidneys altered remarkably, in the way he describes, in a patient whose urine during life exhibited none of the characters that he assigns to the disease. Cases of this nature I have already described to you, and such have been observed by others.

While one of the cases that I have brought before you proves that we may have Bright's kidney without albuminous urine, the other shows that we may have albuminous urine without Bright's kidney; facts which, coupled together, militate strongly against the hypothesis, that the change in the structure of the kidney is connected with the appearance of albumen in the urine. But the discussion of this subject is important, not only in a theoretical, but also in a practical point of view. Dr. Bright, in page 70, vol. i. of his *Medical Cases*, lays down the doctrine, that in cases of dropsy the presence of albumen in the urine ought to er us from the use of mercury, an opinion which is opposed ny experience ; for I have treated several such cases success- y with mercury, and amongst others, I may allude to that Staff-Surgeon Finney, and to the case of Lindsey, a patient ly in the Meath Hospital.

The more recent investigations also of Johnson and Toynbee, l the results of which have been concurred in by Dr. Bright, ve the fallacy of Rayer's pathological views, for they show t Bright's disease of the kidney is a *fatty* degeneration of t organ—consisting in "a secretion of fat or oil globules in epithelial cells which line the tubuli urineferi," and that the sence of albumen or blood in the urine and the wasting are ondary phenomena dependent on the mechanical pressure of accumulated fat. I cannot now enter into a disquisition on se views of the pathology of this disease, but I would wish to r you to the original essays, which you will find in the 29th 30th volumes of the *Medico-Chirurgical Transactions.*

here is a man at present in hospital labouring under diabetes; urnishes one of the best examples of the disease you can t, and I would recommend you to study his case with atten- . He has got the notion that his complaint is one of no nary interest, and he comes occasionally to remain a while in ital and exhibit himself to the class. It is unnecessary for to enter into any general description of this affection; you find a very satisfactory account of it in the *Cyclopædia of tical Medicine,* and a shorter but equally valuable one in Copland's *Dictionary.* The most remarkable features of the ase are those connected with the change in the quality and tity of the urine. With respect to the former, it is called *itus* when it contains a large proportion of sugar, and *insi- s* when it wants the saccharine taste, and presents nothing nd a mere watery flavour. With regard to quantity, the ge is very remarkable : the man who is at present in hospital es eighteen pints in twenty-four hours. In the normal state n passes two or three pints ; this, therefore, must be con- ed as an enormous increase.

hen you come to examine diabetic urine chemically, you find pecific gravity increased. Natural urine ranges from 1015 020, diabetic from 1025 to 1050. Now in every pint of urine of the specific gravity of 1030, there is contained nearly ounce and a half of solid animal matter. If you take a pint this man's urine, and expose it to a temperature of 170° on evaporating dish, until all the watery parts were dissipated, th would remain at least an ounce and a quarter of solid ani matter. Now if you multiply this by eighteen, it will give more than a pound and a quarter of solid animal matter, wh this man loses in the course of twenty-four hours by me of the kidneys alone. I need not tell you that this is a v considerable loss, and hence it is that the man naturally c for large quantities of food to replace it. And such is the nat of diabetes in general; patients labouring under it have activity of the digestive organs increased in proportion to drain from their system: and were it not for this, they woul rapidly run down by the emaciating effects of the disease. notice this extraordinary activity of the digestive system in ot diseases which have a tendency to produce emaciation: t a patient recovering from long fever will frequently take digest, with facility, quantities of food which produce replet in a state of health.

In the case before us, one of the most remarkable thing the length of time the disease has lasted. The man has b now ill for more than three years; it is nearly twelve mon since he was here before, and at that time he was just as ba he is at present. He was relieved then, and went out of own accord, and continued since nearly in the same state found him at his last admission. He states that he has b ever since passing from twelve to twenty pints of urine in day. He is, however, able to go about as usual, eats, dri and sleeps well, and, with the exception of the kidneys, all functions appear to be natural; indeed, he appears to be exce ingly active and vigilant; he exercises a surveillance over patients, nurses, and wardmaids, exposes all their sins omission or commission, and might be now and then a v useful kind of person in an hospital.

With respect to the state of his skin, I may observe that i by no means so dry, acrid, and harsh as we frequently find diabetic patients; indeed, it feels nearly natural, and is parti covered with moisture at various times of the day. So persons, looking almost exclusively to the condition of the sk have taken a very limited view of this disease. They consider it as arising from the perspiration being repressed and turned inwards on the kidneys. This, however, is by no means satisfactory. Some of the worst cases I have ever seen were accompanied by colliquative sweats. A gentleman came from the country last June, to consult me for some affection of the digestive system; on inquiring into his case, I found that he was in the habit of passing very large quantities of urine. I took some of it to Dr. Apjohn to analyse, and it was found to be of the specific gravity of 1049. Now, this gentleman had been subject to profuse perspirations, and used at that very time to sweat copiously every day. In the case above stairs, the patient's breast and neck are frequently bedewed with perspiration.

With respect to the opinions entertained concerning the nature of this disease, I beg leave to refer you to Dr. Copland's *Dictionary;* for my own part, I can form no idea of it except that it is a functional derangement of the secreting powers of the kidneys. I look upon all those hypotheses which have sought to account for diabetes by referring it to derangement of the digestive organs, as useless and unsatisfactory; nor do I see why, in cases of disease, we are to look for all the matters, secreted by the kidneys, in the blood. It is true that there are but few of the matters secreted by any glands in a state of health which may not be discovered in the blood. All or most of the proximate principles of the matters secreted by the salivary glands, liver, and kidneys, are to be found in the blood during a state of health, but in disease the case is quite different. Diseased vessels or parts may assume the function of combining animal principles, in proportions and modes that form results differing in their nature from anything usually to be found in the system.

I confess I can see no difficulty in supposing that a substance so simple as sugar is, may be formed from the elements of the blood, or that the vessels of the kidneys may, in a state of disease, take on a new action and secrete this substance with great rapidity. Sugar is one of those substances which are easily formed by nature; its elements are few and simple, and it may be formed with ease by beings belonging to the animal and vegetable kingdoms. From how many individuals of the vegetable class do we not procure it with facility. How often do we meet it as an animal secretion. Indeed, I have str suspicions that a great many persons in society, who lab under what is merely considered in the light of indigestion, affected with diabetes. This was the case of the gentl whose urine was of the remarkably high specific gravity of 1 He still continues to pass a larger quantity of water than natu but not near so much as formerly; its quality, however, has improved so much as its quantity, and it still contains su The state of health he enjoys is, with the aid of proper regi and precautions, far from bad, and he is enabled to disch effectively the numerous duties attached to the agency of extensive estate in the county of Carlow.

Sir Henry Marsh, who has paid much attention to this subj attests the prevalence of chronic diabetes in a mild form. I to be feared that many cases escape detection, because quantity of water voided by the patient being but little increa the idea of diabetes does not suggest itself to the mind of physician. With regard to the quality of the urine, I may remark, that diabetes may be divided into two sorts: the includes those cases in which the quantity of urine is increa but its specific gravity is less than natural; this compr hysterical and nervous varieties of increased flow of water: second, and to which, indeed, the term diabetes ought prop to be restricted, embraces those cases where the urine cont an animal principle either not naturally found in it or foun increased quantity. To this belong diabetes with sugar, albumen, and with urea, viz., diabetes mellitus, diabetes albu nosus, diabetes ureosus. The latter is by far less common the other varieties. I have not myself met with any exam but it has been described by Dr. Bostock and others. albuminous diabetes is often associated with dropsy, which h attracts the chief attention of the physician. In some ca however, the dropsical swellings are either very slight or gether absent, while the urine is much increased in quan and highly loaded with albumen.

A remark with respect to dropsy was suggested to me morning by one of the cases in our chronic ward, and, le should pass it over hereafter, it may be as well to introduc here. Dropsical effusion is, in every instance, produced *diseased* action of the vascular system, and is the result morbidly affected secretion on the part of the extreme vessels. Now, like every other product of secretion, the effused fluid is liable to undergo great and sudden variations as to its quantity, variations produced by corresponding changes in the vascular or in the nervous system, which latter is so intimately associated with the functions of secretion. This circumstance it is which occasions the swollen parts in anasarca to vary so continually in chronic cases of this disease, one part appearing more œdematous and again subsiding on the morrow. Now, dropsical patients are morbidly attentive to everything that passes, and are constantly dwelling on all the particulars which relate to their swellings. In hearing their report of themselves, you must not therefore allow yourselves to be misled, and you must never attribute any great importance to the local changes, which are too often merely temporary.

But what I want to fix your attention on at the present is the fact, that the dropsical effusions to which internal organs are liable, are subject to similar unaccountable changes, whether of increase or diminution, and that from day to day in some cases. Thus, an anasarcous patient will complain of having spent a wretched night, on account of cough and difficulty of breathing. You find his face, neck, and the integuments of the chest very œdematous; and on examining his chest, great dulness is found in one lung, with moist crepitus; great œdema of that lung in fact exists. In a day or two after, and without any assignable reason, you find that the external œdema has much diminished, and that your patient, free from dyspnœa, has slept comfortably. You examine the chest, and you find a corresponding subsidence of the pulmonary infiltration. The same capricious increase or diminution is observed also in other secretions, as, for instance, in that of the bile.

I was the first, I believe, several years ago, to announce the discovery of carbonate of ammonia in urine *recently voided*, and that in considerable quantity, causing the fluid to effervesce briskly on the addition of an acid. The observation did not excite the attention, if it met the eye, of Dr. Prout and others, who have since written on the composition of the urine in disease. As a second case of the kind, however, has very lately come under my notice, I think it well to return to the subject.

The case, the particulars of which I formerly published, was that of a young man labouring under long-continued fever, attended with maculæ. The urine contained carbonate of ammonia for four or five days, at a time he was extremely bad. As he improved, this salt disappeared.

We at first thought it might have been formed in consequence of the urine undergoing decomposition in the bladder; but it was proved that this was not the case, for when the bladder was completely emptied, the urine formed in it in two hours afterwards was found equally loaded with the same salt. There was no disease of the mucous membrane of the bladder whatsoever, and we were therefore justified in concluding that the carbonate of ammonia existed in the urine as secreted by the kidney. Although I afterwards examined the urine of numerous fever patients, I never met with the same salt.

The case now under our observation at the Meath Hospital is very different, indeed, in everything but the presence of this salt in the urine. A strong and athletic man, employed by the Ballast Board as a labourer, had occasion to work several days standing up to his knees in water. Being at the time constipated, he took a large dose of glauber-salts which acted briskly on the bowels, but he did not cease to work in the cold water notwithstanding. The consequences of his imprudence soon became apparent; for the purgative effect of the medicine was scarcely over, when he was attacked with most violent pain in the belly, accompanied by great distention of the stomach and bowels, thirst, headache, and fever.

In a few days he was admitted into the Meath Hospital, labouring under anasarca, ascites, and intestinal tympanitis. Bleeding, leeching, and the most active antiphlogistic treatment greatly abated his sufferings, and diminished the intensity of the disease; but I fear all our efforts will prove unavailing to procure his final recovery. At the period that the pain and tenderness of the belly, together with the character and frequency of the pulse, demanded the first application of leeches, I was very much surprised to hear from Mr. Knott, that the urine contained carbonate of ammonia in considerable abundance. It was examined in Dr. Apjohn's laboratory by Mr. White, and was found to effervesce briskly on the addition of the mineral acids.

This appearance was owing to carbonate of ammonia in great cess. It was rather of a pale straw colour, contained no umen, and acted on the vegetable colours as an alkali. It posited a precipitate consisting of the ammoniaco-magnesian osphate, and phosphate of lime. This remarkable urine was pposed by some who have witnessed the violence of its efferscence on the addition of an acid, to owe the formation of its nmoniacal salt to decomposition during its retention in the adder. But that this was not the source of the carbonate of nmonia was proved by many circumstances. It was perfectly mpid when voided, and had not the slightest smell of putresence, such as exhales from urine even in the commencement f decomposition. Again, when our patient completely emptied he bladder of its contents, and in half an hour afterwards gain passed a small quantity of water, this latter was found as opiously loaded with carbonate of ammonia as the former. It ecessarily follows, therefore, that the urine, as secreted by the idneys, contained the carbonate of ammonia, which seemed to e a vehicle for excreting those elements which are usually comined so as to form urea; *for in this man's urine not a trace of rea could be discovered.*

The occasional presence of ammonia in the urine, in the form f the ammoniaco-magnesian phosphate, has been long known chemists : carbonic acid is of much rarer occurrence indeed; r not more than one or two cases have, I believe, been observed, which carbonate of lime has been found forming a urinary lculus in the human bladder, although so common in swine nd other animals.

The post-mortem examination of this man, who died soon ter, exhibited the kidneys rather enlarged, and somewhat rgid with blood ; the bladder perfectly healthy ; the liver misapen, round at the edges, smaller than natural, indurated, and mposed throughout its whole mass of globular masses, very m and pale, forming a variety of what is called scirrhous liver.

Before concluding, I wish to lay before you the particulars of very singular case, in which there was a communication ween the rectum and bladder, and fæcal matter passed ough the urethra.

Rev. Mr. S., aged 68, lived for four months after a cancerous ulcer of the rectum opened into the bladder. The first after fæcal matter found its way into the bladder, he had pain, much constitutional disturbance, and collapse; ceased in a few minutes. He continued to pass, for three urine and large portions of soft thin feces per urethra often wind with very loud explosions. After three wee urine became quite natural, but flatus passed more or intervals daily by the urethra. Fæcal matter did not re in the urine for a fortnight, and during the remainder illness he had several intervals of many days, without a viation of the urine from the natural quality. After th opening of the cancer into the bladder, no pain was occa by the presence of the fæcal matters in the bladder, nor any time produce inflammation or discharge from the m nor was collapse produced; at all times the bowels wer opened per anum, the stools being liquid. During th fortnight of the patient's life the urine was constantly c with fæcal matter; it is plain that the cancerous opening first, and for a long while, valvular;—at last, as was pro dissection, the bladder was found most extensively dest and communicating with the cavity of the intestine by large opening; there was no escape of fluid into the abdo cavity.

LECTURE LV.

DROPSY.

ases of dropsy, in the chronic ward, first claim our attention.
have occurred in persons who have previously enjoyed
ly good health, and in both the disease seemed to be un-
panied by organic lesion of any important viscus. One of
tients, J. Austin, states that he has been ill two months
he came into hospital, and acknowledges that his illness
e result of long-continued habits of inebriety. Careless
temperate in his mode of life, and frequently exposed to
nd wet, he got an attack of bronchitis, accompanied by a
f constriction about the chest, and difficulty in breathing.
s bled for this, and states that the bleeding relieved his
ea; but about this period he remarked that an anasarcous
g appeared in his face, neck, and chest.

his case we have a specimen of the ordinary history of
in this country:—first, intemperate habits; next, exposure
, followed by bronchitis or pneumonia; and then dropsy,
ncing in the face, chest, and upper extremities. I have,
rmer occasion, pointed out to the class the importance of
ing in what part of the body the dropsical swelling first
s; because, by doing so, we obtain a more accurate idea
ature, and are furnished with a clue towards discovering
rce.

psy is generally the consequence of organic disease of some
eated viscus. When it is produced by thoracic disease, as
itis, pneumonia, or affections of the heart, it is said that
elling always begins in the face, neck, trunk, and upper
ities; when it depends upon chronic hepatitis, disease of
leen, obstruction of the system of the vena porta, or disease
mesenteric glands, the swelling commences in the abdomen,
en proceeds to the lower extremities; but when it arises
ere debility, the consequence of hectic fever, long-continued

diarrhœa, or a cachectic state of the system, the effusion is first observed in the lower extremities, coming on in the evening, and again disappearing towards morning. The history of dropsical swellings, therefore, by informing us in what part they first appeared, is often sufficient to indicate the general nature of the producing cause.

When this man came into the hospital, his cough had disappeared, and there were not any unequivocal symptoms of disease of the heart, but he had considerable dropsical swelling of the face, chest, and superficial parts of the abdomen; his appetite was bad, and on examining his urine, we found it loaded with albumen, and of the specific gravity of 1029. Though he had no fever or dyspnœa at the time, we commenced the treatment by general bleeding, because he was a person of rather robust constitution, and on account of his dropsy having originated in cold. In persons who are able to bear bleeding, and where the disease has commenced in an acute form, you may often commence the treatment of dropsy by a single bleeding with great advantage, even though there be no fever or local inflammation present.

We next prescribe an aperient injection, to be followed by a vapour bath. I then, by way of trial, gave him an electuary containing some diaphoretic medicines, and found that it acted well on the skin, and that sweating could be easily induced. This furnished me with a key to the after treatment. Whenever you find that sweating can be easily brought on in dropsical cases, you should obey the hint given by nature. You should not, under such circumstances, have recourse to mercury, or hydragogue purgatives, or diuretics; you are to open the passage which nature has pointed out—you are to encourage diaphoresis, and you may rely upon it, that you will in this way effect an easier, safer, and more permanent cure than you could by any of the various modes employed for similar purposes.

We therefore gave this man a powder, containing four grains of Dover's powder and five of nitrate of potash, three times a day. The Dover's powder is tempered by combining it with nitrate of potash, which is an antiphlogistic, and prevents the former from exercising a heating effect on the system. Having continued these powders for seven or eight days, we commenced the exhibition of opium, in doses of half a grain four times a day, to be eased after a few days to half a grain every fourth hour. ler the use of vapour baths used daily, and opium to the unt of three grains in the twenty-four hours, the man has roved wonderfully, and the dropsical swelling is fast subsiding. um has here, you may have remarked, produced no bad effects. tongue is neither dry nor furred, and it has not any of that earance which is observed in persons who are in the habit of ng opium; his appetite is unimpaired, his bowels regular, his strength undiminished.

Now, why did I give opium in this case? The more advanced dents will perceive that I have treated it nearly in the same as I treat cases of diabetes. There seems to be an analogy ween chronic dropsy and diabetes, and experience has proved me that this mode of treatment is most likely to be attended h success. I shall not dwell on this point at present, but ll content myself with observing, that opium and other phoretics increase strength, remove the dropsical swelling, ninish the quantity of albumen in the urine, and bring on conescence without producing any bad effects on the head or estive system. I am anxious that you should attend to this e, and watch the result; for the treatment is quite different m that employed by others. I say this without meaning to im any originality; but I may be permitted to say that it is node differing very much from those generally pursued. It not be used in cases where fever or local inflammation is sent; but when the local and general excitement has been dued, or when the case is chronic, and unaccompanied by ick pulse, or any symptoms of visceral inflammation, it may employed with safety and advantage.

The second case is that of the patient Matthew Gray, a man of ddle age, and rather robust constitution. On admission, he ted that he had been dropsical for about twelve days, and nplained of cough, dyspnœa, constriction of chest, and feverish nptoms. His cough was hard, short, and incessant, preventing ep, and increased by every attempt at full inspiration. He had eral wheezing, much oppression about the chest, and scanty ectoration of frothy mucus. His pulse was 84, soft and her weak: he complained of nausea and loss of appetite, and l œdema of the lower extremities. On examining the chest, I nd it sound clear on percussion, and that the physical signs present were those of bronchitis passing into the stage of supersecretion. In addition to this, there were symptoms of engorgement in the lower and posterior parts of the lung.

Here, then, we had a case of dropsy supervening on acute bronchitis. I therefore ordered him to be blooded immediately, and afterwards to have cupping-glasses applied over the congested part of the lung. The local abstraction of blood was followed by remarkably good effects; it relieved the cough and constriction of chest, and diminished materially the pulmonary congestion. I next prescribed the following mixture, of which he was directed to take one table-spoonful every hour:—

℞. Misturæ Amygdalarum, f℥xij;
Antimonii Tartarizati, granum;
Nitratis Potassæ, ʒij;
Tincturæ Hyoscyami, fʒiss.;
Tincturæ Digitalis, fʒss. Misce.

A mixture like this is well adapted for such a case; it removes the febrile condition of the system, and by its demulcent and sedative properties allays the cough and bronchitic irritation, at the same time that it determines to the kidneys. Those medicines which are termed demulcent are frequently of great value in the treatment of bronchitis; you will often derive more benefit from gum-arabic, spermaceti, almond emulsion, and the like, than from any other class of remedies. In the present case we combined them with sedatives and narcotics; and as the remedies prescribed under such circumstances should be antiphlogistic, we added a grain of tartar emetic and two drachms of nitrate of potash.

I have already spoken of the powerful antiphlogistic properties of a combination of tartar emetic and nitre, and dwelt on the benefits derived from it in many forms of inflammatory disease; so that it is unnecessary for me to say anything at present on the subject. It is obvious to all that the tinctures were added on account of their sedative and narcotic properties, tending to remove irritation and induce sleep, of the want of which the patient complained. But you may ask me why I did not order opium; simply because the disease was in its acute stage, and at a period when opium is apt to produce excitement of the system, and aggravation of the local symptoms. Instead of opium I gave yoscyamus, which neither increases heat, produces headache, nor hecks expectoration; and to this was added digitalis, a sedative ossessed of considerable antiphlogistic properties. Of all the edatives, digitalis may be given with the greatest safety in cases where antiphlogistic treatment is required.

It is unnecessary for me to follow up this case through all its details. It will be sufficient to state that, by gradually changing the nature of the treatment as inflammation declined, and particularly by the proper employment of powerful purgatives, I have succeeded in producing a rapid amendment in his symptoms. It may, however, be necessary to explain why I used purgatives, and in what way they were exhibited. In cases where extensive bronchitis has given rise to pulmonary engorgement and dropsy, when you have relieved the acute symptoms by bleeding, leeching, or cupping, and other antiphlogistic means, and when there only remains some wheezing, oppression of the chest, and rather copious expectoration, you will often effect a vast deal of good by the judicious employment of purgatives. You will clear the chest, relieve the breathing, and diminish the dropsical effusion. In the present instance the patient took the following bolus:—

℞. Pulveris Jalapæ,
Pulveris Rhei,
Pulveris Scammonii, āā, gr. v.
Elaterii, gr. ss.
Bitartratis Potassæ,
Sulphatis Potassæ, āā, ʒss.
Syrupi Zingiberis, quantum sufficit ut fiat bolus.

This acted powerfully, and its operation was followed by marked diminution of the pulmonary engorgement and dropsical swelling. I have frequently endeavoured to impress upon the class the truth of an observation made by Dr. Paris, that in the exhibition of remedies much better effects are obtained by combining several analogous remedies in small quantities, than by giving a single one in a large dose. By combining substances which are of the same nature, that is to say, which are individually capable of exerting the same effect on the system, we are capable of producing more decided effects, even though these substances be given in diminished quantity, than if we prescribed any one ingredient of the combination in a full dose.

I refer to this general principle in order to explain why I h recourse to so many different medicines, instead of employing single powerful ingredient in considerable quantity. It explai why, instead of giving at once fifteen grains of the powder of jal I gave five grains of jalap, five of rhubarb, and five of scammo and added to these half a grain of elaterium and a small quant of cream of tartar and sulphate of potash. With respect elaterium, I may observe that it has been strongly recommen in those cases of dropsy where there is no irritation of digestive system present. Its action on the intestinal t is very energetic, and from the quantity of watery secretion wh it generally brings away, it is of great utility in removing a sarcous swellings.

These are the principal observations which I have to of with respect to this case. I may mention that, as the patie complained much of restlessness, we prescribed half a gr of morphia, to be taken at bed-time. This succeeded in pr ducing sleep, a most important point in the treatment all acute affections. We have now omitted the use of the mo powerful remedies, and have prescribed to-day a decoction Iceland moss with tincture of opium, to act as a pectoral demu cent, and he has been allowed chicken-broth and jelly. I is going on at present in a very satisfactory way, but it will necessary to watch him carefully during his convalescence, a obviate the occurrence of a relapse. If discharged at prese and before convalescence is perfectly established, he would in probability relapse, and soon become much worse than ev Hence I intend to keep him here for a month or six weeks.

As long as I have been attached to public hospitals, I ha made it a fixed rule, in all cases where a cure was possib to keep the patient until it was confirmed. Whenever I obliged, under the pressure of urgent necessity, to dismiss a c before healthy action was completely re-established, or whene patients left the hospital prematurely of their own accord, I h observed that such persons, particularly if placed in the lo ranks of life, and subject to the numberless accidents and posures of poverty, almost invariably returned in a far wo condition than before. It is much better, though perhaps it d not make so striking an appearance in hospital returns, t a certain number of patients should receive all the bene ivable from such institutions, than that a greater number uld pass through them in the year, and be hurried out of m in a state of imperfect convalescence. This observation ticularly applies to fever hospitals, and is, I fear, too little ended to in this city. Certain I am that a vast number of cases of incurable pulmonary and intestinal disease which admitted annually into the Meath Hospital, have had their gin during the state of debility in which the patients were en dismissed from a fever hospital.

Improper diet, imperfect clothing, bad lodging, damp rooms, borne by the constitutions of the poor with comparative punity as long as they are in a state of health; but not so en they are debilitated by a recent attack of fever, treated or ltreated by active remedies, and dismissed from hospital in a ek or ten days after the crisis has taken place. How in- rious to persons so debilitated the change from the warmth d comfort of an hospital to the cold and desolation of a damp rret or cellar. Add to this, that many of them, at the time of eir discharge, still evidently bear the marks of mercurial action their system, and many have their hair very short, in conse- ence of the head having been shaved during their illness. ence, many catch cold that affects the ears or eyes; many come deaf, and not a few get sore eyes; while the number of ose in whom the sequelæ of the fever rapidly induce incurable ronic diseases is so great, that were the balance of the account be fairly struck out, it would be found fever hospitals do less od to the public health than is generally imagined.

There is in the male chronic ward a patient named Garret ine, to whose case I shall for a few moments draw your atten- n. This man is about forty-five, and, like most of his ntrymen who have been addicted to whisky, he is beginning show the fatal effects of intemperance. He had been ill for eral months before he came into the hospital, and is at sent labouring under general anasarca, affecting the chest, per and lower extremities, accompanied by an accumulation of id, but not very extensive, in the cavity of the peritoneum. shall confine myself in this case to an explanation of the sons which have induced me to select the plan of treatment I ve adopted. In the first place, it is a case of chronic dropsy; ondly, it is unattended with fever; thirdly, it is a case in which mercury has been used with some temporary relief, but the disease returned afterwards in a worse form; lastly, it is dropsy accompanied by obstinate diarrhœa, and therefore contra-indicating the use of purgatives or even diuretics, for you are aware that the whole class of diuretic medicines acts more or less on the intestinal canal. I may mention here, acetate and nitrate of potash, turpentine, colchicum, squill, and many other remedies of the same kind. All diuretics act either as purgatives, or they have a stimulant and irritating effect on the bowels.

This patient has bowel complaint, and therefore we are prevented from giving diuretics or purgatives; and the absence of inflammatory symptoms precludes the employment of the lancet or cupping-glasses. You perceive that our field for practice is extremely limited; we dare not bleed, cup, purge, give mercury, or diuretics; the nature of the case contra-indicates the use of all these remedies, and hence we are deprived of the power of using the most energetic agents employed in the treatment of dropsy. What then is to be done? Having observed that the man's appetite and thirst are very great, and that his urine contains a large quantity of albumen, that he has no fever and no symptoms of local inflammation, I decided at once on trying the efficacy of Dover's powder in doses of a scruple in the day, divided into four pills, and gradually increased until it amounts to half a drachm, or two scruples, in the twenty-four hours. I have already remarked to you that a species of analogy exists between cases of this kind and cases of diabetes; in both there is the same tendency in the blood to part with its watery constituents, in both the same inordinate thirst and craving appetite are observed, and in both the same deposition of animal matter in the urine. The principal difference between them is, that in one case the watery fluid is effused into the areolar substance and peritoneal cavity, while in the other it is eliminated from the system through the medium of the kidneys. It was this analogy which led me to adopt Dover's powder in the treatment of this man's case.

In the patient, Kane, a small sore was formed on one of the lower extremities, perforating the skin and areolar substance to the depth of two or three lines; through this aperture a great deal of the anasarcous fluid has drained and still continues to flow off. This is a very fortunate circumstance, as it will tend to prevent any excessive accumulation in the areolar membrane. Previous to its occurrence I had ordered the scrotum and prepuce, which were enormously distended, to be punctured with a needle. The best mode of doing this is to prick the part quickly, so as to give as little pain as possible; the point of the needle should merely penetrate the true skin; the punctures should vary in number from twenty to fifty or sixty, according to the size of the part and the extent of the effusion, and they should be at least half an inch asunder.

By observing these rules you will succeed in evacuating the water without running the risk of exciting erysipelas, which in such cases frequently leads to disastrous consequences. Puncturing with a lancet is not so good as with a needle, it is much more apt to excite irritation in the parts, and thus lead to the supervention of erysipelatous inflammation. The judicious application of acupuncturation, in cases of chronic dropsy, often accomplishes a great deal, for when the external anasarcous œdema is thus drained away, the fluid in the peritoneal cavity is more rapidly absorbed; in some cases, indeed, the good effects of external drainage on the ascites are so rapid, that we are almost tempted to believe that some direct communication may exist between the subcutaneous tissue and the apparently shut sac of the peritoneum. Be this as it may, the good effects in some cases are as decisive as if such a communication existed. This phenomenon countenances the hypothesis of the possibility of fluids percolating through living membranes.

The following case is a singular example of what I must term *spontaneous cure of chronic ascites*:—

Some years ago I was first consulted by my colleague, Dr. Porter, concerning a very remarkable case of ascites. The patient, a lady residing in the neighbourhood of Dublin, had then laboured under the disease for eight years. The abdomen was enormously enlarged, exceeding far in size that of a woman in the ninth month of pregnancy. It was tense, and on percussion afforded a most evident fluctuation. There was no pain felt in any part of the belly, nor was it at all tender on pressure. The lady's general health was good, and she complained of nothing except the deformity and unwieldiness produced by so great an accumulation of fluid within the cavity of the peritoneum.

This accumulation had taken place very slowly indeed, nine years having elapsed since its first commencement, during which time its increase had been equally progressive, that is, it did not appear to accumulate faster at one period than at another. Under these circumstances it was not judged right to attempt anything for her relief. Being employed as medical attendant by other members of the family, I had, during the succeeding years, frequent opportunities of observing the state of the abdomen, which latterly did not appear to increase in size, and for the last year was evidently stationary.

So matters continued until thirteen years from the first origin of the disease, when I was called to visit this lady under the following circumstances. The catamenia, which had never been irregular, but constantly scanty, suddenly became profuse and much more frequent, returning every fourteen or sixteen days, and lasting six or seven. This was soon followed by a most copious discharge of urine, and a rapid diminution in the size of the belly. The diuresis indeed was so great, and the decrease of the tumefaction so sudden, that much alarm was naturally excited in the minds of herself and family. She complained much of debility, to remedy which I allowed a free use of wine negus, and applied compression to the abdomen by means of properly adjusted swathing. In less than a week profuse night sweats commenced, which still further accelerated the disappearance of the ascites, and in about a fortnight from the time the diuresis began there was no vestige of the ascites, and the integuments of the abdomen, relieved from their previous state of enormous distention, hung pendulous, as she herself expressed it, like an empty purse. The diuresis and sweating now gradually ceased, the catamenia became normal, and a nutritious diet speedily restored her strength, and she reappeared in society, to the astonishment of all her acquaintance, with an extremely delicate and slender waist.

The connexion which this case exhibits between the catamenial discharge and the peritoneal secretion is interesting in many points of view too obvious to be noticed.

Let me next call your attention to the occurrence of convulsions in cases of chronic dropsy. Convulsions in hydrocephalus have long attracted the attention of the profession. Those I am about to describe appear to possess features of a very different character. I have now witnessed three cases where they have suddenly and unexpectedly supervened. The first was that of a gentleman about sixty years of age, healthy, but slender, and extremely temperate in his habits; without any apparent cause, he became gradually anasarcous; the œdema commenced in his feet, and after some weeks extended to the integuments of the abdomen. He had some cough and copious expectoration at the period of this attack; his strength visibly declined, and his urine became scanty, but there was no fever. This state had continued for a month, and he did not seem to improve under the use of mild diuretic remedies, when he was attacked in the middle of the night with very severe convulsions, attended with unconsciousness and turgescence of the face, and many symptoms resembling an attack of epilepsy. When the fit subsided, the skin was found to be hot, his pulse quick, and he complained of headache and great restlessness and jactitation. Purgative medicines were exhibited, cooling lotions applied to the head, and a copious flow of blood obtained from the arms by means of leeches. For three days he had many returns of the fits with various degrees of severity. They at length ceased, the fever gradually subsided, the secretion of urine was augmented, and the dropsical swellings rapidly disappeared. His convalescence was complete, and his health has since been unimpaired.

The next case was that of a young gentleman aged about seventeen, who had been for several months affected with anasarca and ascites, and whom I was requested to visit by Mr. Young, of Chatham Street. There was not the slightest vascular excitement, nor could we detect any organic disease, either in the chest or abdomen, with the exception of some occasional tenderness and tympanitis in the region of the stomach. His urine contained a very large proportion of albumen. I need not detail the remedies which we employed, suffice it to say that *cold affusion, acupuncturation*, and a *meat diet* were all successively tried and failed to remove the swellings. His general health did not appear to suffer much, and his appetite continued good. The disease had continued nearly six months, when he was unexpectedly seized with somnolence, ending in a most violent fit of convulsions, closely resembling an epileptic seizure. This lasted for nearly half an hour with more or less violence, and was accompanied by quick pulse and well-marked symptoms of fever, together with determination of blood to the head. During the two following days he had many returns of the convulsions, and at times he lay in a stupid and most insensible state; but these cerebral symptoms then subsided and left no trace behind. The fever, however, continued, and our patient was next attacked with symptoms of violent abdominal inflammation, which also yielded, but was soon succeeded by effusion of serous fluid into both pleural cavities. This effusion took place with great rapidity, and in the course of twenty-four hours our patient died asphyxiated.

The next case I shall give in the words of Dr. Dwyer, who witnessed its progress. I did not see it myself, but Dr. Dwyer's statement may be relied upon as accurate.

"—— Moran, a labourer, aged 40, of robust habit, laboured under anasarca and ascites, with supposed enlargement of the liver. His sufferings, when I first saw him, were aggravated by some dyspnœa. After purgative and diuretic medicines had been persevered in for some time without relief, he was removed to hospital, whence, after being put three times under the influence of mercury, he was dismissed. Shortly after he relapsed, in consequence of exposure to wet and cold, when I was again asked to visit him, and found that all the symptoms had returned with greater violence than before; fearing more mercury, he refused to return to hospital, and consequently I myself attended him at his own room. I administered various hydragogue cathartics and diuretics, and during the following month I more than once succeeded in producing a very evident diminution of the dropsical swellings.

"The improvement, however, never lasted long, and I had begun to consider the case as hopeless, when I was summoned to visit him in great haste, and found him in a fit. He was lying on his back, his face somewhat congested, and the pupils dilated; the pulse very slow and soft; breathing stertorous. His friends said that he had not had any convulsions during the seizure. As the fit had come on suddenly, I considered that it was a case of serous apoplexy, arising from rapid effusions into the ventricles of the brain, and consequently I regarded a fatal termination as almost inevitable. Turpentine injections were administered, and blisters were applied to his scalp. On the following day I was agreeably surprised at finding that he had recovered his consciousness, although he could not speak. In ew days his speech gradually returned, and he was in nearly e same state as before the fit.

"A fortnight afterwards he was again seized in nearly the me way, except that he had now some convulsive motions of the uscles of the face and extremities, and the paroxysm was more vere. I now considered the case as perfectly hopeless, never pecting him to recover from the state of insensibility in which found him. The same means of relief were, nevertheless, plied, and were succeeded by a similar amendment. The coma ated, his pulse became quicker, and in the course of two days was restored to his former state, in everything except the loss speech, which continued, and a diminution of muscular power, most amounting to paralysis of the right side. He remained thout any material alteration in the symptoms for some time, casionally relapsing into insensibility, and again recovering, so to recognize his wife. In the meantime his speech improved, d the paralysis of the right side apparently diminished—a nge which could not be attributed to medicine, for he had g since refused to take any.

'The blister that had, in the first attack, been applied to the lp and nape of the neck, had produced suppuration, which I ered them to keep up by means of proper applications, and I my leave, weary of an attendance where both the patient and friends seemed to have lost all confidence in the resources of licine. I left, however, some diuretic pills and a diuretic ture in his room, and directed his wife to inform me if any- g particular occurred. I did not hear from them for a week, n, being anxious to ascertain how the case had terminated, I a visit, firmly convinced that I should hear of his death, n, what was my astonishment to see him jump off a stool, e himself, arms a-kimbo, before me, and to my timid inquiry, hat news?' answer, 'I am as stout a man now as you.' I naturally concluded that insanity had suddenly been sub- ated for dropsy; but I soon found that he was perfectly in senses. He told me that he had taken my pills and mixture ouble doses, and that a most profuse diuresis had super- ed, rapidly followed by subsidence of the dropsy. He now plained of nothing but weakness, and eventually recovered fectly, and has continued for the last year and a half his upation as a carter."

The fourth case of this affection is an excellent example of the efficacy of the cold affusion in convulsions occurring in the course of dropsy. No application is more common than that of cold to the head in disease of the brain; but the use of cold affusion in the convulsions of children and young persons has not attracted the attention it deserves; at least those who have witnessed the progress of such cases, under the care of the most eminent practitioners in Dublin, say they have seldom seen this remedy applied. I have indeed reason to believe that its utility was known to a few, but it has never been generally adopted; and I myself, for the first time, saw it practised by others, in the case of a child two years old, successfully treated in this manner by Dr. Ireland.

The following is the most remarkable of those which came under my immediate observation:—

I was sent for at the desire of two professional friends to see a young gentleman, 9 years of age, in whom convalescence, from a severe attack of scarlatina, had been interrupted, at first by anasarca, and afterwards by convulsions. The latter had come on quite suddenly at six o'clock in the morning, three hours before my visit, and the fits had been so violent, and succeeded each other so rapidly, that at nine o'clock he appeared to be moribund; his eyes were distorted, void of expression, and fixed; face cadaverous; extremities cold; his pulse very feeble, and so rapid, 145—150, that it could not be counted with any degree of precision. In addition, he appeared to be nearly destitute of muscular power; and in the interval between the fits was unable to speak, while a loud tracheal rale seemed to announce the near approach of death.

As I have detailed the symptoms of the case with the most scrupulous fidelity, and without the least exaggeration, I need scarcely add that our patient's state appeared utterly hopeless. Our first step was to place him in the arms of a strong nurse-tender, who maintained him, as nearly as possible, in the sitting posture; our object in this was to relieve the lungs, and diminish the cerebral congestion. Those who have watched over the dying are aware that the final struggle may be often much protracted by frequently changing the patient's position in bed, and particularly by avoiding the horizontal posture. This mode of proceeding, by preventing the gravitation of blood to any one the lungs, and by counteracting the accumulation of ı any particular portion of the bronchial tubes, causes emain for a longer time pervious to the air, and favours efforts of the respiratory apparatus.

xt proceeded to pour a small stream of cold water from a his head: the effects were extremely satisfactory; for in me the eyes assumed a more natural appearance, and lost nodic fixedness, while the pulse became more and more and diminished in frequency; in short, the violence of on subsided, he was able to expectorate the mucus which ged the larger air-passages, and had caused the *rattles*,* ıe course of half an hour a very marked improvement eptible, the patient being then able to speak and swallow. vulsions, however, returned several times during the lay, but at each occurrence their duration was lessened, violence diminished by the cold affusion. Sitting by f this patient, I more than once was able to predict the e approach of the fit, by means of watching the pulsation arotids, which then became much more frequent and This observation, in connexion with the fact that the ame weaker and more indistinct at that very moment, many interesting considerations concerning local deters of blood.

most unnecessary to remark, that the time we had so edly gained was not spent in inaction, and that we ely had recourse to various other active remedies, such ng the neck, purgative injections, and mercurials, add both internally and externally, with a view of affecting ı rapidly. In addition to the modes of applying mercury nployed, I can recommend the application of the ointment n-pits; this alone will frequently affect the mouth in a The motions of the patient's arms here perform the riction, and this part of the skin seems to possess very sorbing as well as exhaling powers, and is likewise more from the contact of the clothes, &c., so that the ointment sily wiped off and wasted.

regard to local detraction of blood where there is ation to the head, experience has taught me that in

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ıchitis or pectoral affection was present, and consequently the *tracheal* ı was of the most ominous import.

no case ought we to apply leeches to the temples. This is a very important observation, and applies to the treatment of various cerebral affections, such as occur in fever, apoplexy, paralysis, hydrocephalus, &c., &c. Leeching the temples in such cases not unfrequently aggravates the cerebral symptoms, whereas, if the leeches are applied behind the ear, or what is still better, along one side of the neck, this untoward event will be avoided. I say along one side of the neck, because we are thus enabled to promote the flow of blood when the leeches fall off, with less annoyance to the patient than if leeches had been applied at both sides.

A most instructive monograph might be written on the application of cold to the head in various diseases; at present, much mischief frequently arises from practitioners being unacquainted with the different degrees of cold suitable to different states of the cerebral organ, and the different methods of conducting its application, so as to produce relief. In one case of fever I saw violent mania immediately follow the injudicious application of ice to the head; and in another, much difficulty was experienced in saving the life of a young person in whom a collapse of the system, without relief of the local affection, had been induced by the too copious and continued application of cold water to the head.[*]

Where very violent pain in the head occurs in fever, the *cold dashing* with water from a height, as recommended by Dr. Smith in his excellent treatise, is often a most valuable remedy; but in convulsive diseases like that now described, this application is too violent; in such cases the stream of water should be small, not poured from a height, and should be discontinued the moment the fit ceases, to be again renewed on the approach of another paroxysm. I am informed by an eminent practitioner of this city, that he twice witnessed fatal convulsions follow the injudicious use of cold affusion in mania. The efficacy of cold ion in delirium tremens, in asphyxia, in cases of overdoses russic acid, &c., proves that it is too powerful an agent to ndiscriminately applied.

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[*] In a work lately published—*Travels in Kashmir*, by G. T. Vigne—we find the following curious account of a custom that prevails at Simla, and which shows remarkably the influence of cold on the cerebral functions:—"No one visits Simla without descending to Annadale, to pay a rupi for seeing a *mother put her child to sleep*, by laying it so that *a small stream of water is allowed to pour for two or three hours upon the back of its head.* The natives say that it is a healthy practice; that their fathers did so before them; and they still continue to do so, although they admit that many of their children die under such treatment."—p. 29.

he young gentleman, whose case occasioned the foregoing arks, recovered in the course of a few weeks, and is now ectly well. I was not aware when I first published this case ; in Richter's *Specielle Therapie*, that excellent practical sician, Dr. Heim, of Berlin, had used the application of a ll stream of ice-cold water to the head with great success, h in the convulsions and coma of hydrocephalus. This ap- ation is persevered in as long as the insensibility or fits tinue, and it is re-applied whenever they return. Cases arently hopeless have been thus restored to health. He erves that this treatment requires great perseverance and ntion, for the child must be held by an assistant whenever cold water is applied, and its neck and shoulders must be tected by means of an oiled silk covering, as the application he cold must be strictly limited to the head, while the warmth the rest of the body is carefully kept up.

am not aware that this sudden and unexpected occurrence of lent cerebral disease had been described by authors on dropsy viously to my noticing it. They remark, indeed, that some- es an attack of apoplexy suddenly carries off the patient, and y attribute, probably with justice, such an event to a sudden ision of serum into the ventricles of the brain. Instances this nature I have witnessed frequently. The cases I have ited appear to me to depend upon a different cause, viz., a ermination of blood to the head. In Dr. Dwyer's patient, congestion evidently terminated in effusion of blood, causing alysis of the opposite side of the body.

This occurrence, and the frequent return of the fits, prove that disease did not depend upon mere effusion of serum. In the es I myself saw, the cerebral symptoms certainly arose from de- mination of blood to the head, and they were accompanied by rile symptoms and an excited state of the general circulation. The happy termination of three such cases out of four, shows t the occurrence of convulsions, coma, and loss of speech are no means so fatal as has been supposed* in chronic dropsy.

"Tödtliche Ziechen in der Wassersucht sind Schlatsucht und Aponie," says ter.

When such a state of things supervenes, it would almost appear that, if the patient be treated properly, his chances of recovery from the dropsy are rather increased than diminished. It is singular that the cerebral symptoms should have entirely disappeared in all the four cases, a fact which forms a striking contrast with the almost invariable fatality of convulsions when they supervene in jaundice, examples of which I gave you in a late lecture.

DISEASES OF FEMALES.

LECTURE LVI.

ITIS.—PHLEGMASIA DOLENS.—METRITIS.—PUERPERAL MANIA.

the cases at present under treatment in our wards, f Mary M'Quade particularly demands your attention. poor woman was admitted a few days since labouring an attack of fever, accompanied by considerable prostra- nxiety, and restlessness; in addition to these symptoms, s a local affection of a very important nature; the right far as the knee, swelled to twice its natural size, and a erysipelatous blotch occupies the fore part of the foot, ex- g over the ankles on each side. The thigh also is increased e as far as its upper third, so that the tumefaction embraces than two-thirds of the whole extremity. There is a con- ble degree of tension present, and the limb, particularly the internal surface of the leg, is extremely tender, the ess being so great over the course of the veins and lymph- that she could not bear the slightest touch.

re we had a swelling of the lower extremity depending on flammatory condition of the part, and the question is, in tissue did it commence, and what are its characteristic res? Before we discuss this question, it may be proper to ve here that the disease had its origin from cold. When a it is exposed to cold under unfavourable circumstances, inflammation is generally the consequence, and it depends ariety of causes, of what description the inflammation will nd on what particular part it will fall. Where the lower nities are the parts chiefly exposed, inflammation of the r membrane of the leg is apt to ensue; or it may attack ins, as in the case before us, constituting phlebitis; or the atics may be primarily and almost exclusively engaged.

few cases, inflammation attacks the arteries of the limb, as in a case which has been published by Dr. Stokes and myself in the Dublin Hospital Reports, where a person, after exposure of the lower extremities to cold, got an attack of arteritis, terminating in mortification of the limb and death. Exposure of the lower extremities to cold gives rise to phlebitis much oftener than to arteritis. Dr. Stokes and I have published a striking case where inflammation of the veins of the leg was produced by this cause. You will find this case referred to by Dr. Lee, in the excellent article Phlegmasia Dolens in the *Cyclopædia of Practical Medicine.*

You perceive, then, that painful swelling of the lower extremities originating in cold may consist either in the whole areolar membrane being engaged, or it may arise from inflammation of the lymphatics of the veins, or of the arteries. Now, when inflammation attacks in the first instance the subcutaneous tissue of the lower extremities, it frequently in its progress involves the lymphatic and venous tissues; the arterial very seldom, for the arteries lie deep and have no connexion with the subcutaneous areolar membrane. There is, however, nothing more common than that inflammation commencing in this way should terminate in phlebitis, and disease of the lymphatics. This appears to be the nature of phlegmasia dolens, that peculiar inflammation which generally attacks one, and seldom both of the lower extremities; which is most commonly observed in females; and which is characterized by swelling, not pitting, on pressure, by excessive cutaneous tenderness, and by a remarkable whiteness of the skin of the affected limb, accompanied by increased heat, and more or less lesion of the locomotive function. These are the principal symptoms which characterize phlegmasia dolens. The inflammatory condition of the limb causes an exudation of fluid into the areolar membrane, consisting partly of serum and partly of lymph; this produces swelling which is of a firm and rather unyielding character, not pitting on pressure like that which results from anasarca. After some time the inflammation extends to the neighbouring tissues, and attacks the veins and lymphatics, a circumstance which has led many persons, among others Dr. Lee, to believe that phlegmasia dolens arises primarily from phlebitis. This, however, is not borne out by the fact, nor is it true that it consists in inflammation of the lymphatics, as others have suggested; it may engage both the lymphatic and venous ssues, but it differs in many points from pure phlebitis, or true nflammation of the lymphatics.

In the case before us, it would appear that the inflammation commenced primarily in the veins, and by a careful examination you will be able to discover some essential points of difference between the disease and phlegmasia dolens. There is a good deal of soreness present in this case, but the exquisite neuralgic tenderness of phlegmasia dolens is wanting. Again, the shining appearance of phelgmasia dolens is absent, and the colour differs greatly from the dead whiteness observed in that disease. The tenderness also is here more localized, being chiefly complained of on the inside of the limb, and along the course of the veins and lymphatics. On the other hand, it may be observed that these affections have many symptoms in common, and you may have remarked that here, as in phlegmasia dolens, the locomotive power of the limb is considerably diminished. This, however, has been remedied to a certain extent by the curative means employed, and the patient is now able to raise up the whole limb, and bend the leg on the thigh.

Now, whence arises this loss of power so often witnessed in cases of phlegmasia dolens, and phlebitis, and inflammation of the subcutaneous areolar tissue of the lower extremities? I am inclined to think it depends on a morbid impression made on the ultimate ramifications of the sentient nerves, which is propagated along the larger trunk to the spinal cord, and from thence by a reflex course is brought to bear and react on the muscular nerves of the limb. In my remarks on paraplegia, I have spoken of this matter at large, and given several instances of loss of power in a limb, produced by impressions made on the extremities of its cutaneous nerves; and such appears to be the lesion of the locomotive power observed so frequently in cases of phlebitis and phlegmasia dolens. In many cases of paralysis, we find the first stage of the disease attended with an increased sensibility of the nerves of the part affected, tending to show that the primary source of the disease consists in an impression made on the sentient extremities of the nerves; and there is nothing more common in such cases than to find the loss of the motor power accompanied by deranged sensation. In phlegmasia dolens and phlebitis we have great cutaneous tenderness, and this is very rapidly followed by more or less diminution of the muscular power of the limb.

I shall now refer briefly to the curative means employed in this case, observing that it has this in common with many cases of phlegmasia dolens, viz., the inflammation has engaged in succession the areolar membrane, veins, and lymphatics. When the lymphatics are attacked with inflammation, they become swelled, and have a knotty cord-like feel, and this condition is most commonly attended with the appearance of erysipelatous patches on various parts of the limb, over the place where a number of lymphatics are simultaneously engaged. This appears to be the case in the present instance, and it explains the occurrence of the erysipelatous blush which covers the instep and ankle. I need not tell you that the appearance of erysipelas over any part of a limb so circumstanced strongly demands our attention, as it might be an indication of the seat of an injury which may have given rise to the disease. In this case, however, it was the product of the disease, and had no connexion with its origin.

The treatment of a case of this description cannot be conducted on strict antiphlogistic principles. The fever which accompanies venous inflammation is of a low typhoid character, and prostration sets in at a very early period. The intimate connexion of the venous system with the whole economy, the peculiar character of the inflammation affecting the venous tissues, and the rapid prostration of strength which ensues, are all circumstances which contra-indicate general depletion. On the other hand, the best effects have been obtained by active local bleeding, and this appears to be so much the more necessary in cases of phlebitis, as the inflammation is apt to run very quickly into the suppurative stage. I therefore ordered forty leeches to be applied along the inside of the affected limb, directing the nurse to encourage the bleeding by warm fomentations. In addition to this, two ounces of mercurial ointment, combined with two drachms of the extract of belladonna, were spread on large pieces of lint, and applied over the limb after the leech-bites had ceased to bleed. That mercurial ointment thus applied has a tendency to subdue inflammation of a low erysipelatous character has been shown by the late Dr. M'Dowel, in an excellent paper published in the sixth volume of the *Dublin Medical Journal.*

To this we added the extract of belladonna, because the local nflammation was attended with hyper-sensibility of the limb, a ondition over which belladonna is known to possess a remarkble influence. Dr. Lee, I should observe, does not appear aware f the great utility of narcotics in the painful swelling of the xtremities after fever, or in true phlegmasia dolens. In both hese diseases, together with active local depletion by means of he frequent application of leeches, we should employ anodyne ointments, and, above all, large doses of opium internally. Some patients in phlegmasia dolens, if the bowels be regulated, will bear and derive benefit from four, five, or even six grains of opium in the day; I speak of the second stage of the disease. The same observation applies with regard to wine, and to sulphate of quina. It is obvious that phlegmasia dolens consists of something besides mere inflammation; the pain is altogether different from that attending ordinary phlegmasiæ; it resembles more a general neuralgia of the extremities of the subcutaneous nerves. The internal treatment consisted in giving a few grains of hydrargyrum cum cretâ three times a day, to keep up a free state of the bowels, and with a view of gently affecting the system.

You may, perhaps, ask me to account for the great tumefacion of the limb observed in this case. It has been supposed by some persons that the whole swelling depends on the obstruction f the veins; but if inflammation was entirely limited to the veins, the swelling could not be so extensive. It is true that if you produce artificial obstruction of any of the great veins, by placing a ligature on it, you cause, for the time, very considerble œdema of the limb. The obstruction to the passage of blood through an inflamed vein will necessarily give rise to a ertain degree of swelling, but I am inclined to think that this s not the only source of the tumefaction; it would appear that n addition to the phlebitis we have the inflammatory process ommunicated to the neighbouring parts; the areolar tissue and probably the lymphatics become engaged, there is a copious ffusion of serum and lymph, and to this the general increase in ize of the limb is to be chiefly attributed.

With respect to the termination of phlebitis, I may remark hat it generally ends in adhesion of the sides of the veins and bliteration of its cavity, so that when the patient recovers, the ffected vein feels like a piece of whipcord lying under the skin.

We had some patients here who had obliteration of this kind, and in one of them, who died afterwards of fever, I found some of the smaller subcutaneous veins had become totally impervious through their whole extent, and resembled hard cords.

Let me now direct your attention to the case of Rebecca Howard, who came into hospital on the first of this month, eight days after her accouchement, with painful swelling of both lower extremities. From the history of her case it appears that three or four days after her confinement she got severe pain about the heel and inner ankle, accompanied by swelling, which commenced about the same situation, and extended rapidly up the thigh as far as the groin. A similar swelling appeared likewise in the other limb, but instead of commencing below, it appeared first in the upper third of the thigh, and afterwards spread downwards, attended with violent pain, apparently in the course of the great sciatic nerve. Along the course of the veins a number of hard cords, extremely tender to the touch, could be distinctly felt; the lymphatics, though somewhat tender also, did not seem to be so much engaged, and there was no inflammation of the glands of the groin.

Here we had a case of phlegmasia dolens, or, in other words painful inflammatory œdema of the lower extremities, involving the skin, subcutaneous areolar tissue, veins, and lymphatics more or less distinctly. I have already stated to you m opinion, that this affection does not necessarily depend o phlebitis; on the contrary, I think that in the majority c cases the disease commences in the subcutaneous areolar tissue and afterwards extends to the veins and lymphatics. Observ the course of the inflammation in both limbs. In one it commences in the vicinity of the inner ankle, and extends up th thigh; in the other it is first observed in the upper part of th thigh, and spreads downwards. Now, where œdema is the consequence of phlebitis, or where it is artificially produced by tying or compressing one of the large venous trunks, it is always first observed in the lower part of the limb. You perceive, then, that those who explain the occurrence of phlegmasia dolens by referring it exclusively to phlebitis, are not able to account for it as commencing in the thigh and spreading downwards. But how much easier is the explanation, if we look upon it as a peculiar inflammation of the subcutaneous areolar membrane of the limb, involving in its progress, to a greater or lesser extent, the veins and lymphatics, and sometimes extending to the joints! From this view of the pathology of phlegmasia dolens, you can understand why the upper part of the thigh may become primarily affected, and that effusion may take place above before it occurs below.

So far with respect to the pathology of the disease: now with regard to treatment. In attempting to remove this inflammation, we are obliged to keep clear of any measures calculated to increase constitutional debility. This woman, though young, was of a delicate constitution; and there is this peculiar difficulty in the treatment of diseases after parturition, that they occur at a time when the patient has been more or less debilitated by the efforts of labour and its consequences. Our object, therefore, was to reduce the local inflammation, at the same time that we endeavoured to support the woman's strength by a light and nutritious but not heating diet. We commenced with the application of leeches, to the number of ten, along the inside of each limb; these we repeated to the same amount on the following day. In the application of leeches in cases of this kind, you must be guided by the circumstances of pain, tension, and swelling; these are sometimes greater in one portion of the limb than in another, most frequently in the course of the veins; but you should always take care to have them applied over those spots in which the inflammatory process seems to exist in the greatest intensity. Our next step was to open the bowels by means of purgative injections, to be repeated as occasion requires. In addition to this, I directed the limb to be gently rubbed with an ointment composed of one ounce of mercurial ointment, two ounces of lard, and three drachms of extract of belladonna. I have already dwelt so fully on the local, antiphlogistic, and narcotic effects of this composition, that it is unnecessary for me to say anything of it at present.

With respect to internal remedies, I ordered her to take five grains of Plummer's pill every night and morning; but as this produced griping and a tendency to diarrhœa, we were obliged to change it for hydrargyrum cum cretâ, with Dover's powder. On the 24th (the fifth day of her treatment) her mouth became affected, and the pain along the sciatic nerve, as well as the general soreness of both extremities, decreased. I forgot to observe, that from the commencement we had given opiates freely; indeed, this was one of the principal parts of our treatment. She first took the liquor of the muriate of morphia, in doses of twenty drops three times a day: this we exchanged for opiate injections, when her bowels became irritable under the use of Plummer's pill. On the 24th there was a considerable improvement in her symptoms, as I have already stated; but she was very weak: there was still considerable soreness of the extremities, and she complained of pain and tenderness in the right groin, showing that the lymphatics as well as the veins were engaged. I ordered the opiate enema to be repeated, and allowed her the free use of chicken-broth, rice, and a small quantity of wine. On the 25th she was directed to take a pill containing half a grain of opium every third hour. Next day the report states that she finds herself much better, that her bowels are quite natural, that she feels no pain in the lower extremities, except when pressed or moved, and that she had regained the power of her limbs. Two days afterwards she was able to stand, and at present she is so far recovered that I intend to dismiss her to-morrow.

The treatment of cases of this description involves some very curious and important considerations. With the exception of leeching, the treatment which we employed in this case cannot be called antiphlogistic; for through the whole course of the disease we gave opium freely, allowed her nutritious diet, and after the first four or five days the use of wine. This shows that, in diseases called inflammatory, no general rule of treatment can be laid down, and that our practice must vary in the most remarkable manner, according to circumstances. Had I treated this inflammation by leeching, low diet, purgatives, and antimonials, it is very probable she would have sunk. But while we were endeavouring to subdue local inflammation by leeching and mercurial ointment, we supported the constitution by a proper diet, nourishing but not heating, and afterwards by the use of wine. At the same time we gave opium in free and repeated doses, with the view of diminishing pain and irritation, and procuring sleep—a most important matter in the treatment of all acute affections combined with irritability. We also gave mercury internally, because it has been found extremely valuable in such cases, when given rather as an alterative than with the view of rapidly and violently affecting the system. Under this plan of treatment her convalescence has been very rapid. It is a plan abundantly simple, but one which I can recommend to you with confidence.

With respect to the after treatment of this case, I have merely to observe that as soon as the hyper-sensibility of the limbs became diminished, I ordered them to be rubbed diligently twice a-day with warm olive oil. How this acts I cannot distinctly say; but it appears to diminish tension, to promote absorption, and to increase the pliability of the limbs. Latterly, we have given up this, and had recourse to dry friction and bandages. At present she is taking, three times a-day, a mild tonic draught, composed of tincture of orange peel, half a drachm; tincture of hops, twenty minims; carbonate of soda, five grains; water, an ounce.

You have recently witnessed a singular case in the hospital of a woman labouring under phlegmasia dolens, in whom the disease suddenly attacked the eye, and destroyed it in a short space of time—disorganizing it rapidly without the supervention of any redness during this destructive process. I never had any hopes of this woman's recovery, because, in addition to the phlegmasia dolens, she had fever and inflammation of the mucous membrane of the intestinal canal and lungs. She laboured under fever, vomiting, and irritability of the stomach; she had a severe diarrhœa, tympanitis, and a swollen state of the abdomen, with turgescence of the veins on its surface, so as to bear some resemblance to dropsy. She had a constant harassing bronchitic cough; in fact, a combination of unfavourable symptoms, which rendered her case hopeless; and in spite of all the usual remedies, stupes, leeching, blisters, &c., she grew progressively worse, and sank under her complicated load of disease.

I shall not detain you by a detail of her case, and a recapitula tion of the therapeutic agents employed in endeavouring to arrest her complaint, but shall proceed to make some observations with respect to the phenomena observed by Mr. Hudson on dissection. On opening the thorax, there was no serum discovered in the pleural cavities, but there was a considerable quantity in the pericardium. The left pleura was adherent at all points. The lungs were healthy, with the exception of some œdema posteriorly; the bronchi contained a quantity of sanguinolent frothy fluid, but in other respects presented a natural appearance. The right side of the heart contained fibrin, the left some coagulated blood; the valves were healthy. The stomach and intestines presented no sanguineous engorgement, and were apparently free from disease; the liver was large and much congested; the spleen large, soft, and almost pulpy; the kidneys pale, with patches of white degeneration. The uterus exhibited nothing remarkable, except the loaded state of the spermatic veins, which were very large and tortuous: the veins of the mesentery were also congested. The vena cava inferior was healthy down as far as its juncture with the renal vein, below which it was thickened, and filled with a fibrinous substance, varying in its consistence, and adhering to the inner coat of the vessel.

On laying bare the femoral vein, the subcutaneous areolar tissue was found to be infiltrated with serum, the granules of fat much firmer and more distinct than natural, and the intervening areolar membrane thickened and opaque. The superficial fascia was dense, white, and of a flaky appearance, the lymphatic glands in the groin were large, full of serum, and closely matted together by condensed areolar tissue. It was extremely difficult to detach the iliac, femoral, and saphena veins, in consequence of their strong adhesions to their sheaths, and the surrounding organized lymph in which they were imbedded. These, together with the popliteal vein, were similar in condition to the inferior cava, except that the substance they contained was thinner, of a brown colour, and somewhat purulent appearance. In the remainder of the saphena, and in the veins near the foot, there was a plug of coagulum; they were otherwise healthy. The iliac and femoral arteries contained a small quantity of blood; the other arteries were empty.

You perceive, gentlemen, that all these last mentioned parts, so accurately detailed by Mr. Hudson, presented, each in succession, marks of inflammation. The subcutaneous areolar membrane is infiltrated, and granules of fat altered, the cells in which they are deposited increased in size, the superficial fascia dense, white, and of flaky appearance, all indicative of the existence of inflammation. It is found extremely difficult to detach the femoral and saphena veins from their sheath, or from the firm organized lymph in which they lay. As the result of long-continued inflammation, a large quantity of lymph is poured long the track of the vessels, and this mats them together ch a manner as to present considerable obstruction to their chment. The veins and lymphatic glands also exhibit distinct fs of inflammatory action. Why do I make this recapitulation? ause I think it is necessary to impress upon your minds the that all these tissues, and not merely the veins or lymphatics, engaged in phlegmasia dolens. Was there any part spared? the areolar tissue, or the fat, or the external surface of the s escape? No; all were enveloped in the same inflammatory chief. I think you cannot have a better proof than this, that phenomena of phlegmasia dolens do not depend on inflam- tion of either veins or lymphatics solely. In confirmation of opinion, I may observe that I lately saw a case in which h saphenas became inflamed and obliterated, in consequence cutaneous eruption, and yet the gentleman had no accom- ying phlegmasia dolens.

et us pass over this subject and come to the eye. What was state of the eye in this woman? She awoke on the morning the 24th of January with intense pain in the eyeball, and plete blindness of the affected eye, being unable to distinguish t from darkness. On examination, there was immense serous mosis discovered, so great, in fact, as almost to conceal the nea, which appeared, as it were, sunk and buried in it. This mosis was so exquisitely tender that she could not bear the lids to be touched. Nevertheless, it presented a character lly distinct from any other species of acute chemosis we are ainted with, its colour being almost *white*. The exceedingly ll portion of cornea which was visible appeared to be opaque. er symptoms continued with undiminished intensity up to the od of her decease. On examining the eye after death, the ea was found to be perfectly transparent, and the chemosis ave nearly disappeared. The iris had lost its natural grey ur, and become nearly white, and its surface was covered with flakes of lymph, both anteriorly and posteriorly. The ous humour was turbid, and had portions of curdy lymph ing in it. The crystalline lens was opaque and of a light nish tint. The vitreous humour was of a dull yellowish ur, and had its consistence altered, for, on opening it, the which dropped out was thick and ropy.

o recapitulate: the woman awakes suddenly from sleep one morning during the progress of her complaint, feels an intense pain in the eyeball, and finds her sight completely gone. This is a very remarkable circumstance. Again, you have the areolar tissue of the conjunctiva attacked by a rapid inflammation of precisely the same character as that which we noticed to prevail so extensively in a similar tissue in the lower extremity. The principal part of the exhalation which results from the inflammation is deposited in the subconjunctival areolar membrane, forming an enormous protuberance which nearly shuts out the cornea from view, exquisitely tender to the touch, but white and exsanguineous in its colour.

I do not hesitate to affirm that in this new species of affection we have witnessed a case of phlegmasia dolens affecting the eye, perfectly identical in all its characters, and differing in no single material point from the inflammation which attacked the lower extremity. In the leg we have various tissues engaged in the inflammatory process, the skin, areolar tissue, adipose substance, fascia, arteries, veins, and lymphatics; in the eye we have the conjunctiva, iris, aqueous and vitreous humours, and crystalline lens involved in one common mischief. Their identity is further corroborated by the nature of the pain common to both, the sudden appearance of the disease, the exquisite tenderness of the eye, and from the fact that there is no other species of disease on record with which we could class this novel disease. It is a form of disease hitherto unknown, and I believe we may claim the honour of having first described it. It was not iritis, ophthalmia, or amaurosis. In iritis there is pain in the forehead, sight is not instantaneously destroyed, the conjunctiva is red and very seldom exhibits much turgescence; but here vision is annihilated as if by a flash of lightning, there is a wall formed round the cornea which hides it from our view, but its hue is pale and bloodless. There is not a single feature in it by which the most anxious and critical inquirer could trace any resemblance between it and amaurosis, except the single and unsupported circumstance of sudden bereavement of vision. It is unnecessary for me to contrast it with any kind of ophthalmia, as their phenomena, progress, and termination are so essentially dissimilar. All that we have seen of it authorizes us to conclude that *we have witnessed a disease hitherto unknown and undescribed—phlegmasia dolens of the eye.*

Let me next turn your attention to the case of Esther Green, who was also admitted shortly after her confinement. This woman was delivered on the 5th of March, and dismissed about six days afterwards, apparently well. On the 29th, after having previously taken cold, she got symptoms of fever, accompanied by pain of the belly, chiefly affecting her in the hypogastric and right iliac regions. When she came in on the 31st, there was very little fever present, her pulse was slow and regular, and her skin cool; but she was pale and anxious, had general tenderness of belly, with griping diarrhœa and nausea, and complained still of considerable tenderness on pressure over the region of the uterus. Having consulted with Dr. Montgomery, we ascertained that the uterus was enlarged and painful. The case, then, was one of metritis, but not of a very acute character, and which had produced by sympathy a disturbance in the functions of the stomach and intestinal canal.

Eight leeches were applied over the region of the uterus, to be repeated daily, until the pain and tenderness were relieved. We next had recourse to the use of mercury: but as her bowels were in an irritable state we prescribed the mildest of the mercurial preparations, hydrargyrum cum cretâ, and to this we added Dover's powder. Two scruples of the former to ten grains of the latter were divided into twelve pills, two to be taken every fourth hour. This combination is extremely valuable in many cases of inflammation of the viscera of the abdomen, particularly when accompanied by irritation of the intestinal mucous membrane, as manifested by griping and diarrhœa. After two days there was a slight fœtor of breath apparent, and we gave the pills twice a-day instead of every fourth hour, as our object was to affect the system gently, and not bring on profuse salivation. These remedies, with the use of blisters over the region of the uterus, were quite sufficient to remove the disease. The metritis was not very acute, nor was it anything of a specific character; there was no puriform or other morbid discharge from the vagina, and the patient was a young woman of good constitution.

I shall conclude this lecture with an account of a case of puerperal mania. A soldier's wife, aged about twenty-one, and apparently of sound constitution, was admitted into the clinical ward of Sir Patrick Dun's Hospital, on the 6th of March. Eight days before admission she had been delivered of a seven months' child, and it being necessary for her to leave the barracks next day, she got up, drank a glass of whisky, and walked out of the barracks without any assistance. This imprudent exposure, combined with distress, want of sufficient care, and grief at leaving her husband, operated most unfavourably on her nervous system, and she began to exhibit indications of puerperal mania on the sixth day after her confinement. For this she was bled; and, to add to her misfortunes, the vein opened again during her struggles, and a large quantity of blood was lost, the precise amount of which we were not able to ascertain. It was also stated, that she had taken purgative medicines, but what effect they had we could not learn.

When admitted, her face was somewhat flushed, her eyes wild, pupils natural, pulse 125, small and rather weak; the lochia were suppressed, as also the secretion of milk, and she was in a state of extreme agitation, accompanied by mental depression, and constant delirium. Shortly after admission, she became so violent and unmanageable, that it was found necessary to apply the restraint of the strait waistcoat. On the 7th we found her raving as before, and in a state of constant nervous agitation. Her delirium was of a melancholy and desponding character; her imagination was filled with forebodings of future misery, and she expressed in abrupt and thrilling sentences the emotions of a soul abandoned to religious despair. Notwithstanding her incessant agitation, raving, and sleeplessness, there was no effusion of the eyes. Her look, it is true, was wild, and, at times, maniacal; but there was injection of the conjunctiva, and the sclerotic exhibited a pearly whiteness. The pupils were also natural. There was, moreover, no unusual turgescence or abnormal pulsation of the carotid and temporal arteries, and the temperature of the scalp did not exceed the ordinary standard.

But then her cheeks were greatly flushed. Did this indicate congestion of the brain? I think it did not. The flushing of the cheeks was the result of excitement, nervous agitation, and incessant jactitation. When the mind is strongly disturbed by overwrought feelings, and when the body is at the same time in a constant state of active motion, it is quite natural that the cheek should be flushed, and that the flushing should vary conbly, increasing, diminishing, or disappearing according as tensity of the mental delusions and maniacal agitation varied. ses affecting the mind present this manifest difficulty: they react upon the body so as to derange many of the corporeal ons, and great care must consequently be taken to disish such changes from those that are antecedent to and ident on the mental affection.

ain, this young woman was constantly breaking out into irations; indeed, until a few hours before her death, her was continually bedewed with moisture. Here we have ier instance of the power of strong mental impressions in ing the secretion of the skin. The fearful ideas that overned her mind, aided by her incessant agitation and attempts ape from restraint, caused her to break out into perspira- . Besides, irregular perspirations of this kind, without any ous exaltation of animal temperature to account for them, often characteristic of a profound lesion of the nervous m, or of the vital activity of the whole economy. Illustra- of this are frequently observed in cases of hydrophobia, um tremens, cholera, phthisis, syphilitic and mercurial xy, and many cases of obstinate rheumatic or arthritic ions. In addition to these symptoms, this young woman nother of very considerable importance, namely, diminution urinary secretion; she had passed water once on the 6th, with this exception, had discharged none before the period r midday visit on the 7th.

found the patient, on the 7th, in a state of excitement; g, agitated, sleepless; and so unmanageable as to require estraint of the strait waistcoat. From the analogy which d between her symptoms and those of delirium tremens, induced to try tartar emetic; this it was necessary to mix her drink, as she refused all medicine. In addition to this, her head shaved and covered with cloths, dipped in tepid ar and water.

the 8th, we found that she had taken six grains of tartar ic during the last twenty-four hours, and had vomited four . In the course of the day she became extremely violent, her bonds, and ran through the wards, to the great terror e patients. She was, however, seized and brought back to when she became much more tranquil. The tartar emetic was continued in the form of enema, and in this w four grains more, when its use was omitted, and sh take the acetate of morphia in doses of a quarter of a second hour, until sleep was produced. I should hav that she had not slept since her admission, except onc six hours.

On visiting her on the 9th, we found her asleep, a that she had taken three grains of the acetate of mor therefore ordered the morphia to be discontinued, a on inquiry from the nurse, that her bowels had not b satisfactorily since her admission, we prescribed a mixture, composed of infusion of senna, sulphate of electuary of scammony, and tincture of jalap. One-l was administered with some difficulty by the mouth, inoperative, the other half was given in a few hours This also having produced no effect, a purgative given, but proved equally inefficacious. We then ga drops of croton oil, which succeeded in overcoming th of the bowels, and she had four copious motions.

On the 10th the report was, that she had passed without sleep, and in a state of great agitation and vi became much calmer towards morning, and so quie strait waistcoat was removed. Her pulse was 120, rather dry, very little flushing of the face: skin bed perspiration as before. The mental wandering cont she was much more manageable, and put out her to desired. She was ordered a light nutritious diet, a half a grain of the acetate of morphia every fourth h was continued until it produced the desired effect, an for about four hours during the night. She awoke hour, in a state of excessive agitation, became violentl and attempted to get out of bed. After some time s more quiet; but it was evident, from the collapse of he and the sinking of her pulse, that it was the collapse of e and not the calm of relief. She lay for some time wit half closed, her face pale but tranquil, and her pulse fa she had no symptoms of convulsions or coma, and died, and without a struggle, at half-past six.

We were fortunate enough to obtain an inspection o six hours after death, before decomposition could have any alteration of texture or appearance, even in the most delicate structures of the body. The brain and uterus were the parts to which our attention was chiefly directed.

The most careful examination could discover in the brain no phenomena in the remotest degree capable of explaining the occurrence of delirium or death. There was no thickening of the membranes, no sub-arachnoid effusion, no unusual vascularity of the superficial or central parts, no abnormal quantity of fluid in the ventricles, no softening, hardening, or degeneration of structure; everything was unaltered and healthy. We also examined the uterus. It was of the size that organ ordinarily is at the same period after parturition, that is to say, about half as large as the fist, and of a perfectly healthy appearance. Its structure was also natural, and it exhibited nothing worthy of remark in its interior. The rest of the abdominal viscera were healthy; the chest was not examined.

Dissections of persons who have died of puerperal mania are of rare occurrence, and it is seldom we have so favourable an opportunity of inspecting the body. The results obtained militate strongly against the opinion, that delirium, especially when violent and uninterrupted, always depends on changes in the brain, capable of being appreciated after death.

LECTURE LVII.

HEADACHES IN WOMEN.—AMENORRHŒA.—LEUCORRHŒA.—HYSTERIA.

No cases prove more troublesome to the practitioner, and for none is he more frequently consulted, than the headaches of young women. The treatment of this affection, when it arises from an obviously plethoric habit of body, frequently attended with constipated bowels, is sufficiently well understood, and the physician feels pretty confident of giving relief by prescribing early hours, spare diet, and active exercise, together with the occasional exhibition of rather powerful purgatives. When the determination of blood to the head is very violent, such constitutions bear loss of blood well, and accordingly leeches may be applied behind the ears, or to the feet: when applied in the latter situation, the bleeding can be easily promoted by keeping the feet in hot water, and I think that this method is even more efficacious than the application of leeches to the head, or its immediate vicinity; occasionally immersing the legs as far as the knees in water, as hot as can be borne, will relieve the headache.

The effect of hot water thus applied to the lower extremities, on the general circulation, is familiar to all, and was exemplified in a striking manner in the case of an old gentleman subject to attacks of violent palpitations, accompanied by the feeling of approaching dissolution. I was sent for during the absence of his attending physician, Dr. Beatty, and found him in one of those paroxysms: it had lasted many hours, much longer than usual, and a fatal termination was expected both by himself and his friends, as the remedies which usually gave him relief had been tried in vain. By the use of a pediluvium as hot as he could bear it, the palpitations and the sensation of anxiety under which he had laboured, ceased in a few minutes, and he lay down, took some nourishment, and had a refreshing sleep, from which he awoke quite recovered.

In explaining effects so striking, we must not merely confine our ttention to the fact that the pediluvium restores the active circuation of the lower extremities, but must recollect the extreme nervous sensibility of these parts, particularly the soles of the feet: no part of the surface of the body possesses so exquisite a degree of feeling, and hence none is better calculated for being the medium of receiving impressions from cutaneous applications. In most persons the immersion of the feet in water even moderately hot, causes a powerful impression, and often a passing sensation of nausea. When cold water is used, the general circulation is visibly deranged, and respiration somewhat affected, as may be seen in the case of persons walking into the sea; and it is worthy of remark that this impression of cold on the feet acts likewise on the alimentary canal, as is exemplified in the immediate good effects occasionally experienced in cases of colic with obstruction, from causing the patient to walk with bare feet on cold flags, a mode of proceeding at times also effectual in promoting the evacuation of urine in spasmodic dysuria. I dwell on these facts, because there is in certain constitutions a close connexion between cold feet and headaches, the former appearing in many cases to aggravate or even induce the latter; in ordering applications to the feet in such cases, whether in the form of simple or medicated pediluvia, of sinaisms, or of frictions, the scientific physician will be guided y a knowledge of the extensive sphere of action such local pplications enjoy.

In the habitual headaches of robust and plethoric young omen, it is sometimes necessary to have recourse to general lood-letting, when the paroxysm is violent. Thus, in the case f a young lady, seen by the late Dr. Cheyne, Sir Henry Marsh, nd myself, in consultation with Dr. Stokes, the paroxysms of eadache were of most distressing severity, and had baffled r years all internal remedies and external applications, nor ere they at all relieved by the means we recommended as the sult of our consultation; after repeated attacks, Dr. Stokes led her *ad deliquium*, during a violent paroxysm of headache, and ith immediate relief: and it is very remarkable that the relief as permanent, for she has not since been attacked. Where a uppression of the catamenia occurs in such persons, it of course ggravates the headache, and in many instances it is the sole cause of it; indeed, this applies to all cases of headache occurring along with suppression, and therefore it may be well to offer a few remarks on the most effectual method of restoring the menstrual evacuation.

The periodicity of this function can still be traced, even in cases where suppression has continued for a great length of time, by means of the menstrual *molimina*, which occur at stated intervals; in endeavouring to bring on the discharge, therefore, we must be guided as to the time the attempt should be made, by an observance of the period at which these *molimina* occur; for a few days before that time, our efforts to produce a determination of blood to the uterus may be judiciously employed, and if they fail, the attempt should be abandoned until a few days before the next menstrual period; of course I speak not here of the general constitutional treatment, for this must be constantly persevered in, one of the chief means of bringing back this evacuation being the restoration of the health to the natural standard; in some this is to be effected by tonic, and in others by an opposite mode of general treatment.

But of this it is quite unnecessary to speak, as I suppose you are all acquainted with the essential difference between the general modes of management required according to the constitution and habits of the patient. What I wish to impress on your minds is, that all those remedies which actually determine to the uterus or its neighbourhood, as pediluvia, stuping of the genitals, leeches to the inside of the thighs near the labia, aloes, and other stimulating purgatives, &c., should be only used at the times already spoken of. To use them at any other period, either after the molimina have disappeared, or during the intervals between them, tends in most cases still further to derange nature, by determining to the uterus at an unseasonable time, when there is no natural tendency to that organ; under such circumstances, the very same means will frequently fail and prove injurious, which, applied so as to coincide with the time of the natural effort, would have been successful.

To illustrate these principles by an example; we are consulted in the case of a young woman, affected with various hysterical symptoms for several months, and during that period more than usually subject to headache, languor, loss of spirits, diminution of appetite, and irregularity, usually constipation, of bowels;

e is pale, and complains of various pains and uneasy sensations, d has not menstruated since the accession of these symptoms; re it is evident that the constitutional treatment must be rengthening and tonic; the practitioner will, therefore, recomend regular hours, much gestation in the open air, a nutritious iet, tepid and afterwards cold shower baths; he will regulate e bowels and afterwards prescribe a course of tonic medicines, halybeates, preparations of bark, strychnia, &c.; he will likewise quire carefully when the last period happened, and when and how ften since that occurrence menstrual molimina were observed.

He thus ascertains when they should again recur, and contents imself with enforcing the constitutional treatment, until about ix days before the calculated time. Then he lays aside the other edicines, and has recourse to those means which determine to he uterus. Two leeches are applied to the inside of the thigh ear the labium every second night, until they have been three imes applied. The bleeding is encouraged by stuping. On the termediate days the bowels must be actively moved by aloetic ills; and for three nights before and after the day of the olimina,* hot pediluvia, rendered stimulating by mustard seed, ay be used; during the same time, also, frictions with stimuting liniments should be applied to the feet and legs every orning, and oil of turpentine or tincture of cantharides may be hibited internally, while the necessity of more active exercise inculcated. The intention of the leeching is to produce a ndency of blood to the part, which tendency is increased by each petition of the application, and it is still further augmented these applications being made only about the time that the enstrual discharge should have taken place. *If these means il, they must for the moment be laid aside, and the constitional treatment must be again resumed until the same number days before the next period, when the list of remedies, above oken of, must be again tried,* and in few cases indeed shall we d them to fail.

This periodic application of means calculated to determine to e uterus, at the very times that the efforts of nature are directed to the same organ, I have found most successful and satisfactory. It is true that the catamenia may be, and in hundreds of cases are, restored by medicines exhibited at random with regard to the periods: but there is no doubt that their re-appearance can be effected with much greater certainty in the way I have pointed out, and if I am not mistaken, their re-appearance at the natural period has a more salutary effect on the constitution than if they had been forced to come on at other periods. This rule of practice is perhaps not new; it is not proposed as original, but I am anxious to put it forward strongly, because daily experience proves that it is disregarded by the majority of the profession. With regard to the application of leeches to the thighs, I have mentioned two as a fit number in weakly habits, where the constitutional treatment must be strengthening and tonic; it is right to observe that in plethoric young women, in whom a contrary mode of constitutional treatment is proper, four or even six leeches at a time may be used with advantage.

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* By *molimina* are meant pains in the loins, thighs, and hypogastric region, flush-s, colicky pains of the abdomen, increase of headache, and a general feeling of laise, which are familiarly known among females as indicating a *constitutional* rt.

As I am speaking of the state of the menstrual function in the female, I wish to bring under your notice the singular effects of electricity on this secretion, as witnessed by Dr. Le Conte, and related by him in the *New York Journal of Medical Science*. "Five negroes were simultaneously prostrated by a single stroke of lightning on a plantation in Georgia. The sun was shining brilliantly at the time, and a greater portion of the visible hemisphere presented the usual serenity of the summer sky. A singular and rather angry-looking cloud had, for a short time previously, been observed near the verge of the south-eastern horizon, from which occasionally proceeded the low rumblings of very distant thunder. Suddenly the whole atmosphere was illuminated by a flash, succeeded by a single report, and the cloud quickly dispersed, precipitating a little rain. The five negroes were all taken up in a state of apparent death. Three of these could not be resuscitated, although all the ordinary means were assiduously employed. The following is Dr. Le Conte's account of the other two:—

"Charlotte, an adult woman, aged twenty-nine years, was standing about five feet from the root of a tree. After remaining in a state of insensibility for some time, she gradually recovered her consciousness. A dose of castor oil was then administered. The skin on her right shoulder was abraded

: a space as large as a dollar. Her clothes were rent into reds; on the right side of her body the skin was blistered, d marked with discoloured streaks, which extended anteriorly the lower part of the abdomen towards the pubis. A small reak likewise extended along the interior aspect of the right m. She complained of pain in the stomach and bowels for ree weeks. No vomiting or burning in the hands and feet, as as experienced in the next case. She has been married several ars, but has never been pregnant. Her menstruation was per-ctly regular prior to the reception of the shock, but has since at time been very irregular; sometimes having two periods r month, and then escaping two months. The flow has been so much diminished in quantity. Her health has not been ry good since she was struck; manifestly resulting from her enstrual irregularity. A recent copious bleeding has afforded er evident and immediate relief. Her reproductive functions ppear to continue dormant.

"Sarah, a woman aged at least seventy years, was standing mmediately beside the last. She, likewise, gradually recovered er consciousness. No medicine was administered. Her clothes ere rent; and, after a few days, marks of discolouration were anifested along the right arm and right side of the trunk. A iolent paroxysm of vomiting followed the restoration to a state f sensibility, which continued with occasional interruptions for n or twelve hours. As in the preceding case, she complained ry much of pain in the region of the stomach and bowels, for least two weeks after the accident. A troublesome sensation burning was experienced in the palms of her hands and the les of her feet; and in the course of two or three weeks a velling made its appearance under her right foot, which ulti-ately resulted in the exfoliation of a portion of the thick, durated epidermis of that part, about an inch and a half in iameter.

"The catamenial discharge, which had, in accordance with e ordinary arrangement of nature, ceased for more than twenty ars, was completely and, thus far, permanently re-established. t least, a discharge from the genital organs, having all the bvious and sensible physical characters of the catamenia, and bserving, with rigorous exactitude, its peculiar law of perio-icity, has been established, and continues to recur, with the utmost regularity, up to the present time (August, 1844), a the lapse of more than a year. She has not missed a sin menstrual period since she was struck by lightning. To u liberal paraphrase of her own language, her 'Moons return regularly as when she was a young woman.' The flow comes with the usual premonitory symptoms. Her mammæ h undergone an obvious preternatural enlargement, appare originating in a sympathetic irritation, emanating from establishment of the reproductive functions. This woman had but one child, to which she gave birth soon after reach womanhood. The catamenial flux is represented to have b regular up to the period of its natural cessation, between fo five and fifty years of age; subsequently to which epoch she presented all the appearances ordinarily attending the gra approach of the state of senility in a vigorous constitution. electrical shock likewise completely relieved her of a trou some strangury which had harassed her for four or five ye Very recently she has occasionally had a very slight recurre of the same complaint, although under a much milder fo Otherwise her health continues perfectly good, there being far as symptoms show, not the slightest indication of supervention of organic disease of the uterus."

To return to what I was previously speaking of. The rest tion of the menstrual evacuation to its proper period and quan will, in many cases, be in itself sufficient to relieve the tend to headaches. In some young women, however, this tend may exist from the beginning without any menstrual dera ment, or may, along with many hysterical ailments, be ca by leucorrhœa. Where leucorrhœa exists, the use of pedil often increases the evil, and must therefore be avoided. young women, leucorrhœa causes, as is as well known, a s of most distressing symptoms, and therefore, whenever head is complicated with this, we must remove the latter, as the step in the cure.

Having briefly sketched the treatment to be pursued in h ache, as it occurs, first, in plethoric young women; secon in cases of suppressed menstruation; and thirdly, in case leucorrhœa; I must next speak of headache in young person a delicate, excitable temperament, without any menstrua leucorrhœal complication. Such persons are said by their frie to be extremely nervous, and are subject to every variety of hysterical seizures, all, however, marked by the violence of the accompanying headache. No matter what be the form of the hysterical seizure, whether it be fits, trance, or catalepsy, the permanent symptom is headache, and that proportioned to the violence of the seizure; it is of the pain in the head they complain, when able to express themselves, and they all feel convinced that it is the chief cause of their other sufferings. In some this pain is attended with flushed countenance; in others, the external signs of cerebral congestion are less evident; but in all, the true cause of the headache is rendered evident by its immediate aggravation, if wine, even in the smallest quantity, be administered in order to counteract the alarming state of debility to which such patients are frequently reduced. It is this pain in the head which often keeps such persons awake night after night, and which, in habits such as I have described, the physician finds so extremely difficult to remove; for it is evident that most of the means usually resorted to for the cure of determination of blood to the head, must act very injuriously upon constitutions so delicate and possessing so little stamina.

Such persons bear active purgation very badly, and loss of blood, whether general or local, infallibly increases the constitutional excitability and weakness; it is true that much temporary relief often attends the application of leeches to the temples, and the headache occasionally ceases altogether, and usually is, at least, considerably diminished while the blood is flowing from the leech-bites, and for a short time afterwards. But this relief never lasts more than a few hours, and, indeed, often ceases very shortly after the actual bleeding has been stopped; and we then have the mortification of finding our patient as much tormented by the headache as ever, while she is at the same time considerably weakened by the loss of blood; indeed, it may be laid down as a rule of practice, applicable to other parts as well as the brain, that in debilitated, nervous, and hysterical females, however violent the congestion of an organ may be, the attempt at curing this congestion by either general or topical blood-letting is injudicious, for when the constitution recovers from the immediate effects of this treatment, it will be found more disposed than ever to give rise to congestions, usually of the same, occasionally of some other part.

The truth of this principle is strongly confirmed by the effects of blood-letting, either general or topical, in cases of epilepsy *in weak and nervous habits ;* and yet no disease is more manifestly dependent on a state of cerebral congestion than the epileptic fit; detraction of blood is sure to remove the violence and shorten the duration of the fit, but it is as sure to increase the subsequent tendency to their recurrence. Thus, a lady concerning whom I was consulted by Mr. Kirby, had been liable every third or fourth month to a violent fit of epilepsy for the last twenty-five years; about a year ago a young practitioner imprudently used the lancet, and she has since been subject to an attack every third or fourth week.

These observations would detain you too long were I to relate the various cases illustrative of this truth I have witnessed, and often witnessed with pain, on account of the injurious consequences that resulted from its being either unknown or overlooked. In such cases where much suffering is complained of, particularly in so important a part as the head, the practitioner, whose attention is forcibly drawn to this prominent feature of the complaint, both by the patient's suffering, and the representations of her friends, is too apt to be led away by the temptation of affording striking and immediate relief of this particular symptom; he applies leeches; the headache returns in a few hours, and leeches are again applied in increased number, and perhaps repeated a third time, until the debility is so alarming as to induce him to stop.

What is now to be done? The young lady's head is shaved, the scalp and perhaps the nape of the neck are blistered, or else cold lotions and bladders full of ice are applied to the shaved head, and in short this delicate female, labouring under hysterical congestion of the brain, is ruthlessly subjected to the same severe discipline and remedies that are required for the treatment of actual phrenitis; nay, in two cases, I lately saw salivation induced, I need scarcely add, with great subsequent injury to the constitution of the patient. Let me again repeat that this headache and cerebral congestion are sometimes accompanied merely by debility, watchfulness, and repeated attacks of common hysterical convulsions. In other females the convulsions are accompanied by a peculiar trance-like state, in which the patient, when not agitated by the convulsions, lies tranquil l quiet, the eyes being open, but she is totally unable to ak or move, and her perceptions and memory are extremely perfect. In others, again, the convulsive movements gradu-y cease, the eyes are closed, and the patient appears to be in comatose state; she hears, however, and can whisper a few ort words intelligibly.

To treat this affection properly, it is necessary to bear steadily mind that its natural tendency, when art does not interfere, by no means dangerous. It is true that the patient's state pears very alarming, particularly when many other anomalous mptoms affecting the stomach and bowels accompany those ready described; still, however, in the weakly and delicate, and present, my observations must be considered as entirely con-ied to such persons, the danger from the cerebral affection, wever violent, is but trifling. To remove it, however, as eedily as possible, without irritating, weakening, or otherwise juring the patient, is an object of great importance. In such ses I never bleed, never leech, never order the head to be aved, nor do I ever blister. The means to which I trust are, st, moderately cold applications to the forehead; secondly, tention to the bowels by means of fœtid and terebinthinate emata, at least once a day; thirdly, attention to the state of e bladder, lest water should accumulate, as it frequently does, that organ; fourthly, extensive, diligent, and frequently re-ated dry cupping of the integuments in the vicinity of the ad; fifthly, the internal exhibition of oil of turpentine in nsiderable doses; sixthly, the repeated use of stimulating iments to the abdomen and lower extremities; and, lastly, en the fit has subsided, or other remedies have failed, the *rate of silver*, in considerable doses.

The utility of both nitrate of silver and oil of turpentine in h cases, was suggested to me by the good effects these medi-s are found to produce in epilepsy, particularly when it rs in persons of a nervous and delicate habit; and since ve employed them in hysterical determination to the head, ve been able to overcome these and similar affections with h greater facility than formerly; of these, as has been ady observed, the oil of turpentine is best suited to the ent stages of the disorder, and may be given in doses of one wo drachms, to be repeated according to its effects. The best vehicle is cold water; some will bear and derive advantag two or three doses of this medicine in the day, experi from its use a diminution of headache, and removal of lence, together with a moderate action of the bowels and ki In some cases, as occurs also occasionally in the treatm epilepsy, this medicine cannot be persevered in, in conseque the violent dysuria and hematuria it contains; slighter deg these affections should not, however, prevent our continuin

When the paroxysm has abated, or when the oil of turp has failed, the greatest benefit may be derived from the of silver continued for five or six days at a time, in doses a grain four times, or even six times a day. When the are constipated, there is no better combination than nit silver with minute doses of compound colocynth pill, a fo I believe, first recommended in dyspepsia by Dr. James Jol of London, and which I have found invaluable, not mer the headaches of hysterical young women, but in those of particularly the habitual stomach headache to which delica literary men are so subject.

Sometimes it is necessary to combine the dose of nit silver with grain or half grain doses of aloes, in order to p sufficient alvine evacuations; but generally the nitrate of displays in its action a double superiority over most other for it not only determines *from* the head, if I may use s expression, but also sometimes acts as a gentle aperien the two following cases, small doses of nitrate of silver with considerable energy on the bowels. A gentleman, co ing whose case I was consulted by Mr. King, of Stephen's and who laboured under determination of blood to the took, by my advice, after other medicines had been tried, of silver, to the extent of one grain three times a day. duced violent catharsis, and was omitted for some time, w was again exhibited in the diminished dose of half a gra still produced the same effect; in consequence of which w obliged to leave it off altogether. In another gentlem literary habits, to whom it was given combined with small of compound colocynth pill, for the purpose of relieving ache and *obstinate constipation*, a smart purgative effe constantly produced by half a grain of nitrate of silver co with three of colocynth pill.

In the treatment of headache attended with general debility, we often derive much advantage from the acetic acid liniment, of which the following is the formula :—

R. Olei Terebinthinæ, f℥iiiss.
Aquæ Rosæ, f℥iij.
Vitellum Ovi unius.
Acidi Acetici, fʒvj.
Olei Limonum, min. viij. Fiat Linimentum.

This liniment is in imitation of St. John Long's ; and when it is to be applied, the following method must be observed :—The bottle must be very well shaken, and a table-spoonful poured into a saucer ; this is to be taken up in a sponge about the size of a very small apple, previously dipped in hot water, and squeezed dry ; with this the nape of the neck is to be diligently patted (not rubbed) for five minutes or longer. This process is to be repeated night and morning ; and when the skin on the nape becomes irritated and sore, the application may be made to the spine, between the shoulders, for a few days. A similar mode of proceeding may be adopted with much advantage in various neuralgic and visceral affections. In other cases of a similar nature, more benefit follows the external employment of croton oil, from ten to thirty drops of which may be dissolved in an ounce of compound camphor liniment. One or other of these applications has, in my practice, superseded the use of tartar emetic ointment, which is too unmanageable and painful.

With reference to dry cupping in cases of hysterical headache, coma, &c., it is sufficient to remark that several, often so many as six cups, should be fastened on at once to the nape of the neck, between the shoulders, and below the clavicles ; these cups should be all tolerably large, besides which, one or two small ones may be applied near the ears. The suction should be powerful, and should be sufficient to fix the cup for at least ten or fifteen minutes. In a young lady in Grafton Street, in whose case I first tried this method, its good effects were most striking ; she had been lying for twenty-four hours, with her face somewhat swollen, her eyes open and unmeaning, unable to speak, and frequently agitated by violent hysterical convulsions. Mr. Moore applied the cups, and after they had been some time on, she recovered her consciousness and was able to speak. This

result was the more remarkable, as she had, a y
laboured under a similar but less severe attack, for
was treated by two of the most eminent practitioners
by means of shaving her head, leeches, ice, &c., &c.,
treatment which left her in so weakened and nervous a
her removal to the country became necessary, and s
recover her usual strength for several months. The g
of her friends, therefore, on the present occasion, was
indeed, at finding much more decided and speedy rel
without the necessity of resorting to the remedies e
the former attack.

In epilepsy, it may be easily conceived that d
applied to the neighbourhood of the head may afford c
relief; and so, in fact, it does, and is most useful in a
paroxysms, particularly in those cases where previous
or other premonitory symptoms, advertise the pati
approach of the fit in time to have recourse to this a
Its good effects have been well illustrated in a young
affected, and concerning whose case I was consult
Halahan, of Stephen's Green. I may observe that
species of hysterical delirium, attended with gre
excitement, sleeplessness, talkativeness, and delusion
supposing persons to be present who are not so, accor
a frequent wish to get out of bed in some, while c
themselves under the clothes when a stranger appr
say, in such cases I have known the most disastr
quences result from the depleting system being solely
in such cases the dry cupping, as before recommen
probably prove a most valuable auxiliary to a w
internal treatment.*

Mr. Barker, of Gardiner's Row, who had formerl
opportunities of witnessing the effects produced by dr
has given me the particulars of a very curious case:
rank, living in the vicinity of Dublin, was occasional
by violent determination of blood to the head, and eac

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* Though not immediately connected with the subject under conside
mention in this place, that I have derived the greatest advantage from c
some forms of epistaxis, in which complaint much benefit is frequently
the application of cups to the nape of the neck, especially when empl
the paroxysms, in cases where precursory symptoms of a well-mar
precede the attack of bleeding from the nose.

xysms was sure to induce, before it ended, a violent pro- sity to suicide, which she very nearly succeeded in gratifying more than one occasion. This propensity and the cerebral gestion which caused it were afterwards removed, or rather vented, by the timely application of dry cupping, as soon as well-known premonitory symptoms of the paroxysm made ir appearance.

Having alluded, in the commencement of this lecture, to some ints connected with the treatment of leucorrhœa, I shall ortly recur to the same subject. Dr. Churchill, and many cent authors, insist much on the distinction between vaginal d uterine leucorrhœa, and refer to examinations with the eculum, to prove that the latter are much more frequent than e former, especially in cases where the general health is seri- sly deranged. I cannot say whether this distinction is correct; t it appears, *a priori*, by no means necessary to account for e origin of serious constitutional symptoms in leucorrhœa, by pposing that the mucous membrane of the womb itself is plicated in such cases; for surely the vagina is a part possessed an organization, endued with nervous susceptibility and mpathies, quite sufficient to explain any amount of derange- ent of the general health ever observed in fluor albus. Be this it may, experience proves that leucorrhœa from whatever use, when at all copious, occasions great prostration and mani- ld nervous suffering. The general treatment adapted to such valids is sufficiently understood; but the means calculated to eck the flux require some observation.

Astringent lotions are of the greatest service if properly plied, which they very seldom are, when used in the way of jection; for a woman can seldom be taught to introduce the ringe sufficiently, or inject its contents effectually; therefore e lotion is seldom, especially in unmarried females, brought to actual contact with the diseased secreting surface. To medy this defect, I have been in the habit of advising my tients to introduce the lotion by means of several pledgets of en, first moistened with the lotion, and then rolled together, that they can be readily pushed far into the vagina and be thdrawn after a few minutes. If this be several times repeated, lotion will have time to act thoroughly on the whole surface the vagina, and, if need be, as far up as the os uteri. Acetate of lead, sulphate of zinc, alum, and sulphate of copper, wi be found to be the most effectual astringents ; but they must b used in solutions of sufficient strength. In very obstinate cases nitrate of silver, two grains to the ounce of water, may be employe in the same way, care being taken to protect the hands from its blackening influence by wearing gloves during the operation.

When profuse leucorrhœa alternates with too copious menstrual discharge, much benefit often arises from the internal use of Fowler's arsenical solution, carefully persevered in during the intervals between the catamenia. The milder preparations of iron, as the pernitrate and tartrate, are often serviceable under similar circumstances ; but balsam of copaiba, cubebs, cantharides, and turpentine, which some have recommended in chronic leucorrhœa, are seldom borne ; for in such cases the stomach is generally very delicate. Much advantage is, on the contrary, derived from Canada balsam, of which two or three grains made into a pill, with half a grain of sulphate of quina, may be taken four times a day.

I shall now conclude with a description of two singular cases of hysterical affections.

On the 1st of last September, I was called to see a young lad who was represented to be in a state of imminent danger. O entering the room I found her sitting up in bed, surrounded b several female friends, all in the greatest alarm. Her fac was pale, and her countenance indicated a good deal of anxiet She held in her right hand a cup containing water, which sh applied to her lips about every five seconds, and sipped a extremely small portion of the water, which she immediatel swallowed with a considerable effort of deglutition, although th quantity was so trifling. She said that she should be imm diately choked if she discontinued this perpetual sipping; a she referred to an intolerable uneasiness at the root of her tong and in her throat, threatening immediate suffocation the mome she ceased to employ herself in swallowing; and so urgent w the feeling that impelled her to this act, that the moment a attempt was made to take the cup out of her hand she beg to scream with agony, was agitated with convulsions, and to a appearance seemed in the last agony. This scene had lasted f several hours without interruption, and the appearance of th pal actress was rendered still more tragical by a black mass ches around her throat, and the blood from their bites ng down her neck.

examining her more closely, I found that there was no action whatsoever to the passage of air through the larynx, hat she could make a full inspiration without any wheezing ise in her chest; there was no swelling or redness observable root of the tongue or in the fauces. As the young lady f an extremely delicate and nervous habit, being very tary and subject to frequent attacks of common hysteria, I diately conjectured that her present symptoms were the of an hysterical affection, and accordingly I removed the es, stopped the bleeding as soon as possible, and gave her hts consisting of camphor, aromatic spirit of ammonia, and drop, under the influence of which the nervous irritation subsided, and she fell asleep.

ave mentioned this case, not because its nature and the r treatment were not sufficiently evident, or admitted of mistaken by any practitioner of common attainments, but se it presented some circumstances concerning the act of tition worthy of remark. In the first place, it is clear that neasy sensation referred to the throat was a variety, not al variety, however, of globus hystericus. This uneasy tion was, like globus, accompanied by the sensation of nding suffocation. The efficacy of the constant sipping and owing in alleviating this feeling may be somewhat analogous ir well-known effects in stopping another affection plainly spasmodic nature, I mean hiccup, which in most cases may red by a similar succession of quickly-repeated deglutitions y small quantities of water: again, it is worthy of notice, ny attempt to prevent this process was immediately followed neral hysterical convulsions. How opposite must be the of the nervous system in hydrophobia, when the slightest pt to swallow a fluid brings on convulsions!

e next case is one of hysterical vomiting and neuralgia, by very large doses of assafœtida. Anne May, aged 29, ed, has had four children, her last, two years since, still-after which confinement she got cold, with pain in the de, shooting from the scapula to the region of the heart. as admitted into this hospital three months ago for a severe

attack similar to the present, together with some fev
dismissed relieved, having been bled, leeched, and
readmitted on the 5th of July. She states that, f
fortnight, she has suffered from pain shooting from
bone, and along the course of the ribs, till it arrives o
heart, when vomiting of bilious matter is induced by i
Never vomits without this precursory pain. At p
rejects everything from her stomach. No tendern
part of the abdomen on pressure. Her general as
cited, and her respiration is extremely hurried, irre
accompanied by heaving of the chest, and occasion
This state of the respiration appears to persist during
period of the attack, which, however, in its other
is variable, and consists of paroxysms, alternating wit
comparatively calm. She lies for some time quiet on
and then suddenly starts up, rolls about in the bed,
with agony, weeping, and agitated by violent eruct
vomiting, without, however, any disturbance of the p
never had globus hystericus, nor has she been subject t
or pain in the temple; appetite, previous to this att
good. *Catamenia always regular;* bowels generally
urine scanty, and deposits a copious sediment;
tongue moist; complains of thirst (perhaps from vomi

On examination of the spine, she shrinks from pre
the dorsal vertebræ, and along the projections of the
to the left mamma. No palpitation of the heart;
phenomena detected by stethoscope.

6th.—Ordered actual cautery, to six points on ea
dorsal spine, and ten grains of assafœtida every second

7th.—Paroxysms of pain and vomiting occurred fre
to 12 o'clock last night, when they ceased, and have
returned. The cautery was applied, and she took
Bowels confined, urine scanty and thick; other functio
Some tenderness still; respiration now quite tranq
well.

Adhibeatur enema fetidum bis in die.
Repetantur pilulæ tertiis horis.

8th.—No return of pain or vomiting; there is still
on pressure, but in less degree; slept well, took 16 pil

ro fœtid enemata, which produced two scanty evacuations of eces ; respiration and other functions natural ; bad appetite, es not care for food.—Convalescent.

h.—To-day she has some wandering pains in the right side, vere.

experience in other cases of a similar nature enables me ribute the cure of this to the assafœtida, and not to the ry. It is worthy of attention, that she had taken 120 s of assafœtida before the disease yielded, and that the vement was permanent. In hysteria, when the patient e prevailed on to take this medicine, I know nothing more cious than assafœtida : but to be serviceable it must be *in very large doses,* as has been long ago remarked by ical physicians. When exhibited in small doses, as is lly the case, it too frequently appears to be inert, and quently has of late rather fallen into disrepute.

DISEASES OF THE SKIN.

LECTURE LVIII.

ERYSIPELAS.

The first disease of the skin I shall bring under your notice is erysipelas. There were some points of interest connected with the history of the erysipelas which prevailed in this hospital during the months of August, September, and October. In the space of somewhat more than two months, we had about twenty cases of this disease: and, indeed, the morbific cause appears to be still lingering in our wards, though less frequently manifesting itself, for we have had only one case within the last ten days. Its character and mode of treatment have been well described by the late Dr. M'Dowel, in the sixth volume of the *Dublin Medical Journal*, in a paper which I would recommend you to peruse attentively. It has been observed by Mr. Cusack and others, that when erysipelas prevails as an epidemic, we may expect puerperal fever, and scarlatina of a bad and dangerous type. Hence it would appear that the same noxious quality of atmosphere which generates one disease may give additional malignity to others.

Before, however, I proceed to notice the phenomena of the disease, as observed here, I shall make a few observations connected with the treatment of this affection in general. I am anxious to direct your attention to this point, because the history of this epidemic has furnished some useful lessons, and has shown how much the treatment of any disease will depend on its epidemic character and existing peculiarities. The disease was treated here in every instance, and through all its stages, with wine, quina, and opium; and with the exception of a single case, this treatment has proved uniformly successful. Erysipelas, you are aware, is generally looked upon as an inflammatory disease, and its treatment is always more or less antiphlogistic, particularly during the early stage. At this period, it is customary to treat it with general bleeding, leeching, scarifications, purgatives, mercury, and

r emetic ; and I will allow that many cases should be treated
is manner. But the gentlemen who have attended this
ital within the last three months have witnessed a form of
pelas which required from the beginning an exactly opposite
of treatment. In the management of the cases which fell
r our observation, no one in his senses would think of using
ral or local depletion, purgatives, or tartar emetic. The
ent the disease appeared, we were obliged to attack it with
s, narcotics, and stimulants.

ou perceive, then, that in erysipelas there are two very dis-
extremes, between which there are many intermediate shades
varieties. It is well to bear this in mind. When you are
d to treat a case of erysipelas, you should recollect that it is
sease capable of exhibiting a great variety of forms, amenable
o fixed line of treatment, and requiring for its management
the sagacity and skill of an accomplished practitioner. I
e seen many instances in which this affection appeared in a
inct and well-marked inflammatory form ; and I have treated
s with venesection, leeching, purgatives, and tartar emetic,
found these means admirably well fitted to remove the
ase. Here, on the contrary, wine, opium, and sulphate of
na were the only remedies on which we could rely with any
ree of confidence. On the other hand, you will meet with
rmediate cases in which these different modes of practice
uld be employed, either at distant stages of the complaint,
at a considerable interval, or should succeed each other by a
id transition. Erysipelas, I must again repeat, should not
treated from its name.

Many persons have maintained, when gangrene supervenes on
ammatory affections, and among the rest on erysipelas, that
s the result of an excessive degree of inflammation, and that
night be successfully combated by judicious depletion. This,
ever, is by no means generally true ; and it is of importance
t, in forming proper notions of the pathology and treatment
erysipelas, you should dismiss from your minds all precon-
ed opinions, and be regulated solely by the impressions
ived from correct observation and facts. What I wish to
ress upon your minds is, that gangrene may and does occur in
es of erysipelas, quite independently of excessive inflammatory
ion, and requiring a plan of practice quite different from the

antiphlogistic. I do not assert that gangrene does not arise in many instances from the violence of erysipelatous inflammation, and that in such cases it is to be met by prompt and decided antiphlogistic treatment; but I think your views of the pathology of this disease will be both imperfect and false, if you look upon the gangrene which frequently supervenes in erysipelas as the result of immoderate inflammatory action. The following case, which is one of extreme interest, will, I think, bear me out in my assertion.

Mrs. B., a lady of middle age, was attacked with feverish symptoms on the 24th of last March. Notwithstanding the diligent employment of antiphlogistic treatment by Mr. Barker, the pyrexia increased; in the course of a few days her throat became sore, and shortly afterwards erysipelas appeared on the face. Her case assumed a very dangerous aspect: she continued seriously ill for some days, and was saved with difficulty. On the 1st of April, Mr. Carmichael advised the diligent application of fomentations, with the view of relieving the local symptoms; and her son, a young man of eighteen, of temperate habits, florid complexion, muscular frame, and who had always enjoyed a vigorous state of health, undertook the duty of applying the fomentations with much zeal and assiduity. Towards evening, he thought, but without reason, that her case was hopeless, and fell into a violent paroxysm of grief, from which he was induced to rouse himself for the purpose of resuming his occupation of applying the fomentations. While thus engaged, he got, to use his own expression, "a whiff of sickening air from the bed clothes," and immediately felt unwell.

This was on the 1st of April. On the 2nd he was feverish, and complained of headache, for which he got aperient medicine, and was leeched. On the 3rd there was no improvement, and he had passed the night without any sleep. On the 4th, Mr. Carmichael considered it necessary to leech the temples again, and to continue the exhibition of antiphlogistic and aperient medicines. He now began to complain of severe pain in the right shoulder, which at first appeared to be of a rheumatic nature. He became more and more restless, and on the 7th of April was reported to have slept none for the three preceding nights. A very perceptible fulness was now observed under the right clavicle, extending down over the pectoral muscle; the

re tender to the touch, but not red. Mr. Carmichael
ained the hand and arm of the same side with much
, for the purpose of ascertaining whether any wound or
d existed, for the symptoms seemed to resemble closely
duced by poisoned wounds. None, however, could be

estlessness now increased to an extraordinary height;
e following night the patient changed from one bed to
at least one hundred times, and the servants were
ly employed in making and adjusting three beds, from
ich he wandered to another, impelled by an intolerable
f anxiety and uneasiness. During this period his bowels
, his urine copious; and though his fever was consider-
was by no means proportioned to the nervous excite-
or was it accompanied by delirium or pain in the head.
llen parts of the trunk were leeched freely twice, and
y fomented, and continued to present the same appear-
til the 10th, when a red patch appeared near the
, subsequently spreading into a vividly red erysipelatous
hich occupied the skin covering the pectoral muscle and
llary region.
him for the first time on the 11th. His pulse was 120,
no means deficient in strength; skin hot, but covered
spiration; he did not complain of headache, but was
epless, and excessively uneasy. His muscular strength
rently not much reduced, and, indeed, until a few hours
is death, he was able to turn in bed with ease. His
was dry in the centre, and furred, but moist at the edges.
ipelas was now spreading rapidly towards the left side, and
e front of the abdomen. An attempt was made, but in
arrest its progress by the application of nitrate of silver
in, around its margin, an operation which was performed
eat care by Mr. Carmichael. Mercurial ointment was
lied to the inflamed surface, and although the erysipelas
d to spread, we were led to entertain some hopes of our
having succeeded, by means of tartar emetic, followed by
in procuring for him much, and, as he said, refreshing

e morning of the 13th, however, a black colour of the
was observed in the situation of one of the bullæ on his

left side. This alarmed us; and in a few hours afterwards our suspicions were confirmed by the appearance of dark maculæ in many parts of the erysipelatous surface. These livid patches spread very rapidly, and were in some places accompanied by effusion beneath the cuticle, but in others they appeared to consist in a mere change of colour in the external surface of the erysipelatous corium, without any detachment of the epidermis. The patient took abundant nourishment, and got wine and cordials, but without any favourable effect. The scrotum now became engaged, and speedily assumed a gangrenous appearance. In some places the epidermis separated, and the gangrenous surface of the corium secreted sanies in large quantity, but in many parts no detachment of the cuticle took place. On the 14th, nearly the whole of the right side of the abdomen and the scrotum was superficially gangrenous, and the belly became tympanitic.

During this time apparently healthy feces were discharged in considerable quantity; the skin was covered with perspiration; the urine was copious and natural; and we had here, what is worthy of notice, seemingly healthy secretions from the bowels, liver, skin, and kidneys, co-existing with extensive gangrene of the surface. His tongue, however, continued dry and furred; his restlessness unabated; and the sleep previously procured by means of opium now ceased, although that medicine was repeated in the same doses. His pulse also began to sink, but he remained quite sensible and free from delirium until immediately before his death, which took place on the evening of the 15th. During the latter days of his illness he had sweated copiously, and there was nothing remarkable in the odour of the perspiration. I may also observe that the pulse likewise furnished but very fallacious indications; for I can assert with truth, that six hours before his death, though soft and compressible, it still possessed a steadiness and a volume by no means calculated to impart a suspicion of his approaching dissolution. His strength was also such as would lead to an erroneous conception of his real danger; for, as I have before observed, he was able to turn in bed shortly before his death. This observation is borne out by other cases, in which other persons, with extensive gangrenous erysipelas, and in imminent danger, have been known to be capable of walking about.

The evidently contagious nature of the erysipelas in this stance, and the youth and previous good health of the patient, nder this case sufficiently remarkable. It is likewise worthy f notice, as proved by the circumstances, that the gangrene id not originate in the excessive violence of the cutaneous nflammation, for it did not appear in those portions of the skin hich were primarily and most violently affected. On the con- rary, we observed that the parts which became gangrenous had een paler and less tense than those which did not assume that ondition, and that the portions of the skin which died were hose which had become engaged in the latter stage of the isease. This is of importance; for, combined with other facts, t forms an obvious refutation of the opinion not long since aintained, that gangrene and sphacelus are in all inflammations he result of immoderate inflammatory action, and consequently o be averted by antiphlogistic treatment only.

In many instances this opinion, and the treatment founded on t, are, no doubt, judicious; but that there are cases in which he gangrenous tendency supervenes on inflammation, or in ther words, is superadded to the inflammatory process, but ndependent of its intensity, no one will deny who candidly eighs the details of the case which I have just related, and ecollects that the conclusions deducible from them have of late eceived too frequent a confirmation, from the rapidly fatal pro- ress of putrid sore throat—a form of cynanche which reappeared n Ireland after having almost disappeared for upwards of twenty ears. In both cases the disease appears to be infectious, and n both the gangrene seems to be quite independent of the ntensity of the inflammation.

This is a question so important in a practical point of view, hat I shall make no apology for detaining you, as I am anxious impress upon the minds of my younger auditors, that there re certain forms of disease termed inflammatory, in which the rdinary treatment by depletion is quite inadmissible.

In the present epidemic of erysipelas, the disease generally ttacked the head, commencing in the scalp, or about the nose d cheeks; but in some cases it appeared first on the nape of e neck, particularly in those patients who had been blistered that situation during the course of fever. The fever which w prevails seldom abates in less than fourteen or seventeen days; and it was generally about the termination of the febrile excitement, and while convalescence was going on, that erysipelas appeared. Usually, on the fourth or fifth day of convalescence, a change was observed in the patient, and the erysipelatous attack commenced, being ushered in by a feeling of weakness and uneasiness, or an indistinct rigour, followed by quick pulse, headache, some increase of thirst, and in most cases by a marked change in the tongue, which became dry and parched. The inflammation was of a superficial character, expending itself almost exclusively on the external surface of the corium, and not affecting to any extent the subcutaneous areolar tissue.

You are aware that erysipelas becomes obstinate, complicated, and dangerous, in proportion as the inflammation spreads inwards. In such cases its characters are less distinctly marked, and it makes a near approach to a very formidable disease—diffuse inflammation of the areolar substance. The affection of which I am now speaking was generally simple, and in most cases limited to the superficial apparatus of the corium. It was characterized by the ordinary phenomena of true erysipelas, namely, redness, heat, a burning sensation, and slight elevation of the affected parts. There was seldom any remarkable degree of œdema, except in some cases where it attacked the eyelids; and we had no instance of abscesses forming under the skin. It was attended with a considerable degree of constitutional disturbance, and the fever generally continued for four or five days. On looking over the cases of this affection, which have been recorded by the gentlemen who had charge of the patients, I find that in most instances the fever terminated on the sixth day. In many cases a peculiarity was observed, to which I shall by-and-by allude, namely, the spread of the erysipelatous redness in a perfectly symmetrical manner. I believe I was the first who directed attention to the fact, that when erysipelas commences at any point of the mesial line of the body, it is very apt to spread in a symmetrical manner. Thus, in the present instance, the inflammation commenced in the majority of cases about the nose, and then extended in a perfectly symmetrical manner over the forehead and down the neck; or when it appeared first on the nape of the neck, it travelled down between the shoulders with a very remarkable symmetry of extent and outline. Sometimes this precise correspondence did not exist; but I can assert that in more than two-thirds of the cases it was extremely well marked. It appears, then, that this occurrence is not so very rare as Dr. Johnson supposed. When I first noticed the fact of the occasionally symmetrical spread of erysipelas, he said it was an observation of very little importance, and that it was to be looked upon as a matter of mere curiosity, a phenomenon which a man would not see twice in the course of his life. I have, however, shown it to many of the students half-a-dozen times during the last two months.

The treatment of this affection, which was abundantly simple, and the same in every instance, was entirely regulated by the circumstances under which the erysipelatous attack occurred. No local treatment was employed, nor was any required. It was not necessary to apply leeches, cold lotions, fomentations, or mercurial ointments. The cutaneous inflammation was not either very extensive or intense; and the constitutions of the patients did not admit of any kind of depletion. The internal treatment was determined on, more from a consideration of the circumstances under which the disease had appeared, than from an accurate analysis of the symptoms, or from any preconceived opinions of the nature of the complaint. In the practice of your profession you will be frequently called upon to treat affections, in which you will have to consider not only the existing symptoms, but also the circumstances under which they have originated; and in many instances you will find that your treatment will be determined more by the latter than the former. Here we had a number of patients labouring under erysipelas, at a period when the system was reduced by fever, and the powers of life at a very low ebb. No one could think of using antiphlogistic or depletory measures under such circumstances. Recollecting that our patients had just emerged from a dangerous disease, we adopted a very different mode of treatment; and in all cases, except where the patient's strength was unbroken, the fever high, and the local symptoms of an intense character, we had recourse at once to tonics, narcotics, and stimulants. We first gave an emollient injection, and then administered sulphate of quina in the form of enema, to the amount of from five to ten grains, blended with mucilage of starch. This was administered twice a-day, and the patient was directed to take small quantities of wine and light nourishment.

Many of the pupils at the time were surprised at this mode of treatment. From the dry state of the tongue, the occasional delirium, the restlessness, and the headache present, they were inclined to think that the patients would be injured rather than served by dietetic and medicinal stimulants of this description. I had, however, witnessed cases of a similar description, and had observed the tongue become clean and moist, the skin soft and cool, the thirst, fever, and restlessness subside, and the local symptoms disappear, under the use of wine. In this instance, also, the value of our mode of treatment was borne out by the result; for, with the exception of a single case, all our patients recovered. In this one instance the disease assumed a malignant form, and carried off the patient in a few hours.

She was a young girl of apparently vigorous constitution, and who had got tolerably well through a dangerous maculated fever: towards the middle of the fever she had exhibited symptoms of cerebral excitement, for which we deemed it necessary to blister the scalp. At the time when the erysipelatous attack came on, she had been for several days ill, and was in that low state in which the skin has a great tendency to become ecchymosed, and form bad sores. This tendency I have observed in many instances of low fever, and it is a condition which is always pregnant with danger. The occurrence of ecchymosis, excoriation, and superficial gangrene in such cases is not so much the result of pressure, as of the general debility, and the impaired condition of the fluids and solids of the body. It was in this state of the system, and with her scalp still suffering under the inflammation produced by the blister, that this poor girl was attacked with erysipelas of the face. Unfortunately, at the time the erysipelas attacked the sound skin of the head, the blistered surface was attacked with gangrene; and two dangerous local affections became thus suddenly conjoined. Under this unfavourable complication her constitution sank with great rapidity, and she died in twenty-four hours from the commencement of the attack.

One of our cases of erysipelas occurred in the fever ward under peculiar circumstances, and requires a separate notice. A young woman was admitted some time ago, labouring under spotted fever; she had been many days ill before her admission, and continued for a considerable time in an uncertain state. It is unnecessary for me to enter into any details regarding her treat-t after the more obvious indications were answered, dered to use the liquor sodæ chlorinatæ, and became nt, or *quam proxime* so. Her tongue began to clean, en was soft, the bowels natural, the skin cool, and the .t 80. One evening she got fresh symptoms of fever, ng the night, and next morning, when we visited the found her pulse accelerated, her tongue dry, black in , and dusky-red at the edges and tip, and, in addition e had some diarrhœa. The nostrils were filled with a 'ete mucus, exhaling a most offensive odour; in fact, hardly approach her bed without experiencing nausea xtreme fœtor. The inside of the nares was red and n short, erysipelas was seen occupying the nose, upper face, and forehead. It had first attacked the skin and ›us areolar tissue, producing considerable œdema, and .t had extended to the mucous membrane of the nose. generally commences in the skin, but sometimes it gin in the mucous membrane.

ıot tell you that erysipelas of this œdematous character, ed by such a remarkable change in the secretion of the nd occurring in a person weakened by fever, was to be ›n as a dangerous disease. How did we treat this? usual antiphlogistic means, for the patient was greatly . Blood-letting, leeching, emetics, and purgatives out of the question; however valuable they may be in ıses, we could not use them here without risking the ife. You might think that an emetic or a purgative ery little harm and might effect much good, but you llect that the girl had nausea, thirst, bowel complaint, prostration of strength. What then was to be done? ıpplied a blister to the nape of the neck, to act partly in and prevent delirium, and partly on the erysipelatous ion of the nose and forehead. How blisters act in this not exactly know, but you are aware that a blister the neighbourhood of a patch of this kind of œdema›elas is often followed by very good effects. Whether citing a new irritation, or by directing the current of ous circulation to another part, and causing a flow of her, I cannot tell, but blisters certainly do give very le relief. So much for external means.

Now, with respect to internal remedies, the only one we could give here, with any prospect of benefit, was the sulphate of quina. But the patient had nausea, thirst, and diarrhœa, and if you administer quina by the mouth, under such circumstances, you will do more harm than good. I therefore prescribe it in the form of enema, directing five grains of quina, combined with four of tincture of opium, and two ounces of mucilage of starch, to be thrown up the rectum every fourth hour. Under this treatment the girl began to improve rapidly, the erysipelas faded away, the fever declined, and she is now once more convalescent. I also ordered her nostrils to be repeatedly syringed with warm water and vinegar.

Here, gentlemen, you perceive our treatment has been successful in a case occurring under very unfavourable circumstances. It is a case the study of which will afford you some instruction, particularly if you compare its symptoms, progress, and treatment with the case of erysipelas which occurred in the strong, healthy girl who is lying near, and which we treated on the emetico-cathartic plan.

Let me now call your attention more particularly to a case which afforded a striking example of the symmetry of form sometimes assumed by erysipelas. While the epidemic tendency to erysipelas was observable both in hospital and private practice, the disease was observed in numerous instances to follow the application of leeches, blisters, setons, &c. During this period it was thought necessary to insert a seton in the nape of a young man labouring under hemiplegia. Erysipelas was the consequence. The redness spread from the neck to the face and hairy scalp, and at the time it began to subside in these parts proceeded downwards over the skin of the chest and arms. The outline of the erysipelas was remarkably well defined, and its rate of progression equable: about the fifth day from its appearance it had involved most of the chest and the upper part of the arms, and was now remarkable for the perfect similarity of form and extent exhibited by the halves into which the whole was divided by the median line. It did not, indeed, seem to have advanced on one side at all more than on the other, and on both the outline was exactly the same; the space it occupied on one side of the median line was, in short, a facsimile of that it occupied on the other, a coincidence rendered more striking the devious and apparently capricious course the eruption owed.

Thus, when it arrived at the top of the shoulder, it did not ceed along the outside of the arm further than the insertion the deltoid, from which point it spread obliquely downwards, arly to the opposite extremity of the biceps. In like manner, will be observed that when it reached a central point on the rnum, it proceeded with a curved outline, avoiding the mamma each side, and sloping downwards, to form on the back a figure sembling two festoons. It is clear that both anteriorly and steriorly it spread much more slowly along the median line, a cumstance probably connected with the great density of the in and subcutaneous areolar tissue, here more fibrous than ewhere, and less vascular. Its stopping at the insertion of the ltoid may have been owing to a similar cause. Numerous inances might be brought forward of cutaneous disease journeying wards at exactly the same rate in one part of the skin as in other; for to this is owing the circular figure assumed by many rieties of lepra, herpes, impetigo, porrigo, &c., when the morbid tion originating in one spot spreads equally all round, progressg in the circumference and ceasing in the centre. The circular rm of fairy rings in pastures, the true nature of which was first inted out by Dr. Wollaston, affords an example in the vegetable ngdom of an analogous equability of progression from a central int.

I have now seen several examples of this symmetrical spread erysipelas. One occurred very lately in Sir Patrick Dun's spital, in a woman, in whom the point of departure for the ease was the face. From this the erysipelas spread over the p, and then advanced downwards over the neck and shoulders. ing its daily progress I pointed out to the students how prely its outline at one side of the median line corresponded with t at the other. This coincidence was the more singular, for boundary of the advancing erysipelas was at each side very gular in form. I think, therefore, that more accurate obserions on this subject will cause a change of opinion in the nds of some who at first opposed my views.

LECTURE LIX.

ERUPTIONS OF THE SKIN PRODUCED BY ANIMAL POISON.

I SHALL proceed to-day to the consideration of two affections resulting from animal poison, one of which has been but recently introduced to the notice of the medical profession: of the other I am not aware that there are any published cases in existence; I allude here to glanders and button-farcy in the human subject.

The profession is chiefly indebted to the researches of Dr. Elliotson for the first accurate account of glanders in the human subject—a disease which has now excited a very large share of attention here and on the Continent; you will find his essay in the 18th volume of the *Medico-Chirurgical Transactions.* Many other observations, published since Dr. Elliotson undertook the illustration of this disease, have established the fact, that the morbid matter secreted by horses labouring under glanders may communicate the infection to the human subject, and thus give rise to a loathsome, painful, and generally fatal disease. From the notices which I have been able to collect, it appears that glanders in man is of very frequent occurrence in Ireland; so frequent, indeed, that I think the legislature is called on to imitate the wise example of the Prussian government, in placing glandered horses under the surveillance of the police.

Like many other animal poisons, that of glanders does not seem capable of affecting every individual indiscriminately; indeed, the average susceptibility must be small, for grooms and veterinary surgeons take few or no precautions in examining the diseased animals; and yet the proportion infected, compared with the number exposed, is by no means considerable. That such persons exhibit great carelessness in examining glandered horses appears from the directions given in books on farriery, "that the finger should be introduced into the nostrils for the purpose of ascertaining whether certain spots suspected to be ulcers are so or not." Now, when the viscid, gluey nature of the discharge from tril is taken into account, we cannot but conclude that this n of introducing the finger into such a mass of vitiated sonous secretion would more frequently prove the means tion, were the human constitution very susceptible of the ; for we are to recollect that the fingers of such persons om free from scratches and abrasions.

ll now read the following case of glanders in the human It is one of extreme interest, and has been most faith- d graphically detailed. It occurred in the Richmond l, and has been communicated to me by Dr. M'Donnell, he surgeons of that institution. You will find in it many f resemblance to a series of cases translated from a Ger- rnal, and published in the *Medico-Chirurgical Review*.

trick Wallace, a healthy muscular man, aged 20, was ad- into the Richmond Surgical Hospital on the 6th October, It is stated that he had been in care of a glandered horse ng, cleaning, &c.—and that he had been in the habit of g out of the vessel from which the horse drank. It d also that he had an abrasion on one of his ears. On on he had much the appearance of a person labouring ynanche tonsillaris : he could only open his mouth to the of half an inch ; this was the only uneasiness complained e left tonsil was very much enlarged, red, hard, and pro- towards the middle line; no fluctuation could be felt; as a general fulness about the angle of the jaw, extending s nearly as far as the zygoma. The sub-maxillary gland same side was also enlarged and indurated. These ms had been ushered in by feverishness a few days previous ission. He was ordered to have eight leeches to the to be followed by a poultice, and a bolus composed of l and jalap.

xt day the external swelling was found to be increased; difficulty of opening the mouth; the tonsil still hard ollen. Twelve leeches were applied to the fauces, and ient took the tartar emetic mixture of the hospital with e of magnesia.

the 15th of October the disease is reported to be on the . Tonsil still hard, but no fluctuation; left side of the face swollen ; eye of the same side nearly closed from tumefac- he lids ; general inflammatory appearance over the cheeks, and great hardness of the tissues about the angle of the jaw of the same side, extending towards the chin; several circumscribed spots of redness, varying in extent from the size of a sixpence to that of a halfpenny, with irregular margins, scattered over different parts of the body; two pustules observable on the left leg.

"16th.—A vesicle containing a yellowish serum observable on the left tonsil; the same inability of opening the mouth continues; increase of swelling over the left side of the face; a small abscess has formed on the posterior part of the left forearm; some delirium during the night; three evacuations from the bowels. The tonsil to be brushed over with a solution of nitrate of silver; a blister to the fauces; the tartar emetic mixture to be continued.

"17th.—Some sleep during the night, interrupted by delirium of a low muttering character. Patient appears willing to answer questions, but cannot, from obstruction in the mouth. This, however, lasts but for a moment, and he then lapses into a state of incoherency. Mouth open to the extent of half an inch; left eye closed; considerable swelling of the left side of the face, which is indurated, hot, tense, and shining; all the glands on both sides of the jaw, but particularly on the left, are swollen and hard; same state of tonsil; nares dilated; breathing stertorous, somewhat hurried, about 28 in the minute, and interrupted by frequent sighs. Pulse very small, rapid, intermittent, and cannot be counted; skin hot; tongue furred, teeth covered with sordes. He complains of great thirst, but says he feels no pain; it is evident, however, that he feels great uneasiness in the joints and limbs when moved. There is, however, no swelling or redness of the joints; there is no discharge from the nostrils, nor is there any perceptible ulceration of the mucous membrane of the nose. No apparent affection of the absorbent glands in any other part of the body.

"During this period, vesicles and pustules of various sizes, and at various stages of growth, had made their appearance on different parts of the body, particularly on the back. They varied in size from the head of a pin to the section of an almond. In the first stage they resembled very minute vesicles, scarcely surrounded by any inflammatory border, and containing a limpid serum. In the second stage the serum was replaced by pus; there was a considerable blush of redness around each pustule, iich at this period became greatly increased in size. When one the vesicles was punctured, the serum appeared to come from single cavity under the cuticle : this operation did not produce ay subsidence of the tumor, a considerable hardness still maining in the cutis or beneath it, with a cavity in the centre which the serum was contained. A number of achores existed in arious parts, congregated together, and not much larger than he head of a pin. Those clusters were surrounded by *white aised margins*, having much the appearance of wheals, and bout a line and a half or two lines in breadth ; between these argins and the achores there existed a line of redness. The hole taken together are rather of an oval shape. There also xisted numerous inflammatory spots on the right shoulder, left rm, and other parts of the body. These were of a dark brown, pproaching to a livid colour; when pressure is made on them the olour disappears, but returns immediately when it is removed. On running the finger over them, a small hard tumor was felt n the centre : the margins of these spots were irregular.

"On the 17th, the character of the disease became more plainly eveloped : at three o'clock p.m. pus in considerable quantity was observed to issue from both nostrils. The patient was rdered to take the solution of chloride of soda internally, in drachm oses, three times a-day ; and also a mixture composed of car-onate of ammonia, liquor æthereus oleosus, and camphor mixture. At five o'clock p.m. he was found half out of bed, his head rest-ng on the pillow ; still able to express his wants ; pulse not to e counted ; legs and feet cold ; breathing stertorous ; numerous tigmata scattered over the surface of the body. The purulent ischarge from the nostrils has ceased, but there is a discharge f mucus from the mouth, with considerable fœtor of breath.

"Eight o'clock p.m.—A copious perspiration has broken out er the body ; face red, tense, shining, and very much swelled ; elling has now extended to the right side of the face ; right eye arly closed ; can open the left better ; a few pustules have made eir appearance at the inner canthus of the eye. Pulse, tongue, d skin as in last report ; delirium and muttering continue.

"Died at 4 o'clock a.m., October 18th.

".On examining the body ten hours after death, the redness as found to have disappeared from the face ; the glands about e left angle of the lower jaw as before mentioned ; they were found matted to the surrounding parts. The areolar tissue covering the sub-maxillary and parotid glands was infiltrated with serum, and indurated; numerous depositions of pus were found in the tissue of the sub-maxillary and parotid glands. The brain was firm, but its ventricles contained a considerable quantity of fluid: the arachnoid membrane was opaque in many places; several patches of vascularity were observed on the pia mater. The lungs presented a congested appearance; numerous pustules were scattered over their surface—some separate, yellow in the centre, and surrounded by an ecchymosed border; others existing in clusters. They resembled, in every respect, those found on the surface of the body. The lining membrane of the larynx was very much inflamed, especially about its upper part and about the epiglottis. The inflamed parts in this situation were of a livid hue. There was some appearance of vesicles in the trachea, but this could not be satisfactorily ascertained. The bronchial tubes were filled with mucus; the stomach contained a quantity of yellowish green mucus—its lining membrane presented an ecchymosed and inflamed appearance. The liver was somewhat enlarged, and adhered by its inferior margin to a few folds of intestine. The periosteum did not exhibit any appreciable deviation from the normal state."

One of the chief things to be noticed in the foregoing case is the variety of inflammatory affections observed in the skin, as the result of the introduction of an animal poison into the system. There was, in the first place, the general diffused redness of the face, then superficial inflammatory spots on the shoulders and arms, resembling erythema nodosum; in the next place, scattered pustules of various sizes, commencing in the form of a vesicle, which afterwards became a pustule surrounded by an inflammatory zone; and lastly, achores congregated together, and surrounded by an elevated white margin, within which there existed an inflammatory ring of a red colour. Another point worthy of notice is the state of the lungs and bronchial mucous membrane. The lining membrane of the larynx, particularly in the vicinity of the epiglottis, was inflamed and of a livid colour, and there was an indistinct appearance of vesicles in the trachea. But what was particularly deserving of note in the lungs was the existence of pustules on their surface, bearing the closest resemblance to those found on surface of the body. It is not stated whether there was any earance of vesicles or pustules in the nose, pharynx, or phagus; but we are told that the stomach was ecchymosed inflamed.

he following case was witnessed by myself and Dr. Halahan, seems more nearly allied to the variety of glanders termed ton-farcy. The subject of it was a gentleman residing at thmines, an extensive proprietor of horses, and who, having ginally graduated as a surgeon, exhibited much skill in the erinary art. About the time of his illness he had some ses in his establishment labouring under glanders and button-y, to which he paid particular attention.

After having laboured for some days under considerable lassi- e and derangement of the stomach and bowels, he was attacked the 8th of July with rigors, followed by great thirst, excessive t of skin, and pains in his limbs. The moment he felt him- attacked in this way he said he was sure that he had got ne dangerous infection from the horses, and would never over. He took some blue pill and colocynth, which pro- ed a few dark and very fœtid evacuations. On the 9th his se was 94, his urine very high-coloured, his thirst and erish symptoms rather increased, and he suffered greatly m constant nausea and vomiting. A tumor now began to ear about three inches above the inner ankle of the right t. He applied a poultice over it, but was obliged to remove in a short time, in consequence of the pain occasioned by its ight. The tumor was about the size of half a walnut, of a l red colour, tense, shining, and exquisitely painful. Its ernal aspect was peculiar, and might be compared to some- ng intermediate between a boil and a spot of erythema osum. On the 10th another tumor of the same character eared near the outer ankle of the same leg; and in this way disease went on, tumor after tumor appearing on different ts of the body, with an increase of the feverish symptoms, il the 20th of July, when he was first seen by Dr. Halahan.

t this time several tumors had appeared on different parts is body; there was one of an extremely painful character on head, and he complained of great tenderness and pain along right clavicle. His thirst was still urgent, his restlessness ssive, the slightest motion gave him exquisite pain, and sleep had completely abandoned him. He had endeavoured t regulate his bowels by purgative medicines, and had applie leeches to the tumors and to the clavicle at various times, but without any decided benefit. There were eight or nine tumors on different parts of the body, of the character before mentioned, without any tendency to suppuration, and so exquisitely painful that he could only bear a single sheet over him. The inflammation about the clavicle, which was of a diffuse character, had extended up the neck and over the right shoulder; there was not much swelling, except about the clavicle; the colour of the affected parts was a peculiar dusky red. Immediately over the clavicle two vesicles were observable, filled with a transparent fluid. Three dozen of leeches were ordered to be applied over the clavicle and shoulder, and the patient was directed to use chicken-broth, beef-tea, and other light nutritious articles.

On the 21st, all symptoms are stated to be on the increase. His fever, thirst, and sleeplessness are undiminished; his tongue furred and dry; his teeth covered with sordes; his pulse small, weak, and rapid; his nausea and vomiting not so troublesome. He had received no benefit from the application of the leeches; the swelling and stiffness of his neck were increased, and he had some difficulty in swallowing. The erysipelatous surface of the neck, clavicle, and shoulder were lightly brushed over with lunar caustic, which gave the patient an agreeable sensation, and from which he stated that he derived much relief. This was repeated the next day at his own request, and with equal benefit; the difficulty of deglutition diminished, and for two days he went on pretty well.

On the 25th, there was an evident increase of fever: the tumors over the body and limbs were increasing in size and number, and his anxiety, restlessness, and sufferings were unabated; he had taken alternative doses of calomel and James's powder, and his bowels had been regulated by mild aperients and enemata. I saw him for the first time on the 28th. His pulse was then 98, small, and easily compressed; his thirst excessive; his restlessness and agony such as would strongly excite the pity of persons most conversant with scenes of human suffering. He had several tumors over different parts of his body, all exquisitely painful, and in their aspect something between boil and erythema nodosum. Some of them were hard to the touch; others, which appeared more advanced, were softer and had a boggy feel. There was, however, no appearance of anything like suppuration. He was ordered sulphate of quina, chicken-broth, ale, and other light nourishment, and an opiate at night. On the 31st, a tumor appeared on the right side of his forehead, larger and more painful than any of the rest. Another of a similar character showed itself on the right clavicle, which had been previously affected. Shortly after their appearance, vesicles were observable on their surfaces, such as generally precede mortification in cases of anthrax and malignant carbuncle.

Next day he was evidently worse; his pulse was 108; his fever, pain, and restlessness unabated; and a miliary eruption began to make its appearance over his chest and abdomen. The vesicles now began to increase on the surface of the tumor; his fever and restlessness were aggravated; and his mind, which had been hitherto collected, began to wander. His restlessness was so excessive, that he could not remain for a moment in the same position; and being a person of much mechanical ingenuity, he had a set of pullies constructed and fastened to his bedstead, so that he could move himself in various directions. His medicines and diet, with the addition of claret, and opiates at night, were continued as before.

On the 6th of August he was still worse; the tumor on the head continued to enlarge, and decided sloughing had taken place. The tumor on the clavicle presented the same aggravation in appearance and character, and a fresh tumor had appeared on the back of his head. A pustular eruption now began to make its appearance over his body, chiefly over the abdomen and limbs; his symptoms became aggravated in every respect; the delirium and watchfulness increased; and he died on the 10th of August, about thirty-three days from the commencement of the disease. He attributed his illness to attending horses, four of which had died of button-farcy; and what is also curious, his nephew, who had also been engaged about the diseased animals, had fever of a typhoid character, with maculæ of a larger sort than usual, but ultimately recovered.

The symptoms of glanders in the human subject have been so fully detailed by Dr. Elliotson, Dr. Hutton,* and others, that it

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* Reports of the Dublin Pathological Society.

external disease is chiefly limited to the skin; in
have often swelling of the parotid gland, with infil
adjacent areolar tissue in addition to the cutaneous
syphilis, and cases of dissecting wounds, we have d
skin frequently combined with an affection of th
lymphatic glands. The same observation applie
many cases of which are characterized by an erup
over different parts of the body, or by the occurrenc
termed petechiæ.

On these matters I need not enlarge, as you are a
with them; but that vesicles and pustules very sin
observed in dissection wounds, and other diseases
the direct introduction of animal poison into the
arise from the action of morbid changes spontaneou
in the body, is a fact which admits of being prove
to us a new and interesting field of inquiry. Thus
of typhus, where the effect of pressure or some o
has occasioned bed-sores of a bad character, and eve
are no bed-sores present, I have on several occasi
secondary fever produced, and have observed vesicle
appear on the skin, similar to those described by
accompanying the fever of dissection wounds. A
this occurred some time ago at this hospital, and you
witnessed another in the case of a young man rec
typhus.

xplain the circumstance by supposing that it is the result of a poison generated in the system during the course of fever. This is particularly deserving of notice, as I am not aware that any author on typhus has noticed this symptom, or pointed out the circumstances under which it occurs.

The same phenomena is occasionally observed, where, in consequence of external injury, diffuse areolar inflammation has taken place. Thus, several years ago, a woman was admitted into the Meath Hospital, who had diffuse areolar inflammation in consequence of receiving a kick on the chest. After a few days, Colles' pustules appeared on different parts of the body, and she died with symptoms of croup. On dissection, the croupy symptoms were found to depend on an eruption of vesicles filled with opaque serum over the lining membrane of the larynx and trachea. Something analogous to this was observed in the case of Wallace ; and the coincidence is further strengthened by the frequent occurrence of disease of the lining membrane of the larynx and trachea in many other febrile affections, accompanied by cutaneous eruption—as small-pox, measles, syphilis, and scarlatina.

Another point which is deserving attention with reference to the phenomena of external disease, in cases where animal poisons have been generated in the system or arisen from infection, is the occurrence of tumors in different parts of the body, partaking of the characters of furuncular inflammation or carbuncle, and running through a somewhat similar course. These tumors formed a very prominent feature in the case of Wallace ; and in the gentleman who laboured under button-farcy they constituted one of the most important symptoms of the disease. We also observe something similar to this in that form of venereal which Mr. Carmichael terms tubercular, and which is characterized by the appearance of small, hard, dark-red tumors on various parts of the body, which exhibit a very imperfect tendency to suppuration, and frequently give rise to sores of a bad and unfavourable character.

During the spring of this present year (1848), I was sent for to the north of Ireland to see a gentleman, whose case affords an excellent illustration of the remarks I have now been making. He was a large heavy man, of middle age, in the habit of living well, but usually in the enjoyment of good health. In the month of February an eruption of herpes zoster appeared on his chest over the region of the heart. This was treated antiphlogistically; and amongst other remedies he was placed in a warm bath, the effect of which was to cause faintness, irregularity of the pulse, and acute pain in the heart. A large blister was now applied over the præcordial region; *this sloughed, and was afterwards healed with very great difficulty.*

When I first saw him in May he was suffering from a peculiar sharp pain in the chest, with a feeling of tenderness, yet *numbness*, of the surface. So marked was this last symptom, that he did not feel the dressing of an issue which had been inserted there. He also complained of intense neuralgic pains shooting through the chest if he attempted to lie on the left side. Colles' pustules had appeared on various parts of the body; these were followed by successive crops of boils, together with large carbuncles. From all these he continued to suffer for four months after the sloughing of the blister, and eventually the herpes reappeared in its original situation. I saw this gentleman lately in consultation with Sir Philip Crampton; his health was much restored, but he still suffered from occasional palpitations with feeling of faintness, and the numbness of the side continued. At Sir Philip's suggestion he was ordered to take the cold infusion of bark with magnesia, but neither it nor any other remedy had the least beneficial effect, yet by the lapse of time he seems to have, up to the present, gradually improved.

Now, in this case, a very important question arises as to the generation of a poison in the system from the effects of a blister. Comparing it with the remarks I have already made in this lecture, I think that we can fairly take this view, and thus account for the appearance of Colles' pustules, the boils, anthrax, &c., which in some instances continue to come out during even years. The chief practical deduction, however, which I wish to draw is, *that where such a tendency exists, you should beware of the use of liniments, blisters, the insertion of issues, &c.*

There is a circumstance in Dr. M'Donnell's case which I have brought before you, that deserves some share of attention; I allude to the white elevated margins, like wheals, around the redness which more immediately encircled each cluster of achores, and which we are to look upon as in a less advanced stage of its progress, being as it were only the first stage of the latter. It is a curious fact, that on many occasions a preternatural degree of whiteness precedes the redness and congestive purple hue which usher in mortification. This is generally known in the case of the nose when frost-bitten, and which always appears preternaturally white in the commencement. Something analogous to this was observed in some cases of bad typhus treated in 1826 and 1827. The nose sometimes assumed a peculiar white colour, and not unfrequently exhibited a tendency to mortification. When first seen it had a preternatural whiteness, and looked very like a nose made of white wax; in the course of a few hours it changed to a purple red, and exhibited symptoms of approaching gangrene.

Again, in urticaria, we often see some portions of the inflamed skin assume a white colour, and the same occurrence may be noticed likewise in the wheals caused by nettles or the stings of bees. In general we connect the idea of integumental inflammation with the appearance of redness; and this phenomenon is explained on the hypothesis that a preternatural quantity of blood is circulating in the inflamed parts. How, then, are we to account for the facts that I have mentioned? To what cause are we to attribute the co-existence of increased vascularity and the remarkable whiteness or pallor of the parts—a state displayed in a very remarkable manner in *phlegmasia dolens?* I think the explanation is not very difficult when we recollect that the capillary vessels of the white tissues of the body contain no red blood in their healthy state. It is easy to conceive that in certain stages of inflammation, the quantity of serous or white blood circulating in any of these tissues may be suddenly much increased, and that this increase may be accompanied by all the phenomena of inflammation except redness. In certain cases, as phlegmasia dolens, the colour is permanently white; in other cases the white is exchanged for redness when the inflammation has increased in intensity; but perhaps we should not use this expression, for the phlegmasia dolens proves that a *white inflammation* may be quite as intense as *red inflammation.*

The following case is an example of the occurrence of *purulent* vesicles:—A woman named Green was admitted into the Meath Hospital, with erysipelas of the head and neck, accompanied by high cerebral symptoms, the consequences of a contused wound on the scalp. On the second day of her admission we observed a vesicle of a peculiar character on the right hand. It was about the size of a small pea, full of pus, and surrounded by a base of a deep red hue about the size of a shilling. Between the shoulders, two more vesicles exactly like the first were discovered. The erysipelas and head symptoms gradually disappeared under the action of mercury, and the vesicles burst, and left an encrustation which soon fell off, leaving a newly-formed and healthy cuticle underneath.

A day or two after the appearance of the vesicles on Green, a girl who had been in the hospital about six weeks, labouring under general debility, palpitations, and excessive action of the heart, with extreme irritability of the stomach, depending on amenorrhœa of seven months' duration, presented on the forefinger of her left hand a well-marked vesicle, of the same size and character as those noticed in Green's case. Though she had got a good number of boils in other parts, she had only the one vesicle, which also burst, scabbed, and the crust fell off, leaving the cuticle underneath quite healthy.

In the same ward with Green was another girl named Scully, affected with symptoms the consequence of suppressed catamenia, who was also attacked after Green with an eruption of the same kind of vesicles on both hands. At first the parts became red and itchy, then small vesicles with serum appeared, which, when they attained the size of a small pea, became filled with pus. Each vesicle was surrounded by a deep red base. Some of them were as large as those of pompholyx. One very large vesicle was observed to have one half distended with pus, and the other with serum. They were extremely itchy, and the red base was very painful. These vesicles extended over both arms up to the elbows, continued longer than in the two preceding cases, and then terminated in the same manner. But in this instance their disappearance was immediately followed by inflammation and abscesses of the left mamma, producing great suffering, and attended with painful periostitis of both shins. Under appropriate treatment she eventually recovered.

Bearing some analogy to the foregoing, and requiring somewhat similar treatment, is another class of cases, in which, after some slight injury, and sometimes without any apparent cause, persons are attacked with local affections, attended with fever, remarkabl sleeplessness, and an eruption of those pustules which were first described by Mr. Colles. I shall read here for you the notes of an interesting case of this description which I received from Mr. Trenor.

A lady, aged about 30, of dark hair and pale complexion, was visited by Mr. Trenor in October, being at that time three days ill. She had suffered some time previously from a cutaneous affection of the hands, which, from the appearance of the skin and the description given by the patient, was supposed to be psoriasis. Three or four days before her illness she had pricked her finger with a needle, but did not pay any attention to it, as a similar accident had often happened before without any consequent inconvenience. On examination, three pustules, or rather vesicles of different sizes, were found on the inside of the finger and wrist, and there was an indistinct blush on the inside of the arm, which, however, the patient thought to be caused merely by the weight of the limb, as she lay on her side. The fore-arm was intensely painful, and the slightest touch excited extreme agony. The arm was also tender, and in the axilla was a small hard tumor, exquisitely tender to the touch, and from which the pain shot inwards over the anterior and upper part of the chest. The affected arm was powerless, and very painful on motion. Her pulse was 100; tongue white and moist; bowels opened by medicine; skin not differing much from the normal temperature; but she was extremely restless, and had not slept for the last two nights. She was ordered to take three grains of calomel and two of the watery extract of opium at bed-time, and an aperient draught the following morning: the tumor in the axilla was carefully poulticed. On the following day the pain of the limb continued, but she had rested much better. The tumor in the axilla was stationary. The calomel and opium were repeated in the same quantity night and morning, and she took a quina mixture every third hour. Next day she appeared much easier, and, under the same treatment, combined with occasional purgatives, she improved rapidly, and in the course of four or five days required no further treatment, except an opiate at bed-time, and the quina mixture, which was continued for some time longer. The painful tumor of the axilla gradually disappeared of itself, for the local applications were given up at an early stage of the disease, being more inconvenient than serviceable.

Here, you perceive, a train of severe constitutional and local symptoms arises from an apparently trivial injury, and the patient is attacked with fever, sleeplessness, and exquisite pain of the affected limb, accompanied by a slight blush of erysipelatous redness. There was also the same loss of muscular power which we observed in the cases of swelled leg after fever, showing that the extremities of the muscular as well as the cutaneous nerves were engaged. Now, in this instance, Dr. Trenor took the same view of the case as I did in a somewhat similar one which I am about to detail. He looked upon the irritative fever, the sleeplessness, the agonizing pain, and the pustules as symptoms not to be treated by bleeding, or leeches, or cold applications, or tartar emetic and nitre, but by tonics, opiates, and a mild, nutritious diet. He gave calomel or blue pill, with full doses of opium and quina, and ordered her to take chicken-broth and beef-tea. During the course of four days she took fifteen grains of opium without any affection of the head or derangement of the stomach, and nine grains of calomel and a drachm of blue pill in the same period without any appearance of salivation. I have no doubt that in this instance the free use of opium tended not only to produce sleep and to relieve pain, but also to diminish the constitutional irritation on which the eruption of pustules seemed to depend.

The next case of this affection deserving of notice is that of a French sailor boy admitted into Sir Patrick Dun's Hospital, labouring under a violent and dangerous form of fever, apparently typhus, but wanting the usual eruption of maculæ. His pulse was but little accelerated at first, but he was very weak, restless, and sleepless, and complained of exquisite pain in the side of the neck extending over the whole surface of the right side from the angle of the jaw to the tip of the shoulder. This region was very tender, and exhibited a diffused swelling and fulness with very slight redness, the latter only visible towards the centre. There was pain in the axilla, with incipient inflammation of one or two glands; and the right side of the chest, though neither red nor swollen, was very painful on pressure. Immediately after detecting the existence of this diffuse inflammation, I remarked to the pupils that this was a case likely to favour the development of Colles' pustules, and accordingly I examined his skin and found two vesicles, each as large as a lling, on the fingers of the right hand ; one of these vesicles s formed round a light superficial wound on the knuckle of middle finger.

Here it was not easy to determine whether the diffuse inflam- tion of the neck was a consequence of the wound on the uckle, or whether the former, arising spontaneously, had nerated in the system a morbid poison, which had reacted on integuments around the wound, and formed a vesicle sur- nding it. I am inclined to adopt this latter opinion, for I ve seen more than one similar case proving that where a ison is at work producing a tendency to cutaneous eruption, existence of a small wound in the skin generally determines morbid action towards that point of the surface, and causes, en any of Colles' vesicles are formed, the formation of one und the wounded spot. Thus in a grocer, ill of typhus, om I lately visited along with Mr. Bourke, of Camden Street, e of these vesicles formed round a sore on his knuckle inflicted a sharp scoop prior to the commencement of the spotted er. Here the fever evidently engendered the poison, while e wound determined its action on the skin to a particular ce: the same is observed in psoriasis, in venereal cachexy, d in small-pox. While the constitution labours under any these diseases, injuries of the skin frequently call forth the ecific cutaneous affection of the injured part.

But to return to the case of the French sailor. At first the fuse inflammation of the neck was not accompanied by much er, but in a few days suppurative fever set in, and circum- ibed swelling was observable in the centre of the inflamed rt. After a short time this was opened by Mr. Houston, and large quantity of pus evacuated; some improvement in his neral health took place, and the peculiar distress produced by diffuse inflammation in the neck, arm, and side subsided; agonizing tenderness had gone, and he seemed to be fast proving, notwithstanding the profuse discharge of matter n the opened abscess, when suddenly he got acute hectic r, rapid emaciation, and a sunken countenance, with cough shortness of breath; a moist crepitus was now discovered he upper lobe of the right lung, just below the seat of the ess. The case now assumed a most hopeless appearance, in the exhausted state of our patient we had but slender hopes of his recovering from this pneumonia. The question occurred, What caused the pneumonia? Did it arise from a communication between the abscess at the lower part of the neck and the upper lobe of the lung, or was it phthisis rapidly developed in a constitution run down by previous illness, or was it simple and self-existent pneumonia? These are questions which it was not very easy to determine, and yet how important was the determination with reference to prognosis!

If the pulmonary affection depended on an extension of the inflammation from the neck to the upper part of the lung, there was a chance of recovery; but if it were phthisis, the boy was lost. I declared to the class my conviction that it was phthisis, and for a few days the boy seemed hurrying to the grave, when suddenly the abscess in the neck dried up and became consolidated, and at the very same time the pneumonia in the lung just below the abscess disappeared as rapidly as it had risen. All fever subsided, and the boy, getting rid of his pectoral affection, was at once out of danger. I cannot explain the remarkable and unhoped-for termination of this affection, except on the supposition that the moist crepitus in the lung and the pectoral symptoms originated in a suppurative inflammation suddenly extended from the lower part of the neck to the contiguous portion of the lung, and as suddenly ceasing when the abscess healed. I have dwelt on the particulars of this curious case, as I have never seen nor read of anything similar.

An old man from Bray, admitted into the clinical ward of Sir Patrick Dun's Hospital, exhibited extensive gangrenous erysipelas on the inside of the right knee and thigh, caused by a moxa applied for the cure of pain in the knee. In a few days patches of diffuse inflammation, ending, some in sloughing, and some in suppuration, appeared on his hand and other distant parts, and several of Colles' vesicles developed themselves on his trunk. Shortly after, another man, young and athletic, who had been bled for pneumonia, and in whom the wound in the vein had caused ill-conditioned diffuse inflammation at the bend of the arm, was admitted under my care. In him, too, Colles' vesicles formed in various parts. You may gather from the numerous examples we have witnessed, that these vesicles or pustules constitute a peculiar feature accompanying many varieties f disease, which agree but in one circumstance, the formation cutaneous eruption caused by the operation of a morbid n, generated in some cases in the system itself, in others luced from extraneous sources. Among the most frequent s that give rise to the evolution of this poison in the system fuse inflammation, no matter how produced—whether by a e, a burn, a punctured wound, a bed-sore, or the poison of lers. You may also remark that the cutaneous affection caused bears some analogy to exanthematous diseases of a nant character, and marks a state of the system requiring opium, and quina. In most instances the eruption is either llar or vesicular, but in some it assumes the appearance nall patches of diffuse inflammation, or of ill-conditioned icles.

hall now conclude with an account of the case of Dr. Orpen, ve, who suffered from an attack bearing certainly a close ty to the class of diseases I have described in this lecture. d you his own report of his case from a letter he addressed e:—

I would feel much obliged by your giving me your opinion very painful and troublesome furuncular affection I have been ct to for some time. The first attack I had of it, which arly five years ago, came on my hands and wrists, and I buted it to some matter that got on my hands while dressing a of phlegmonous erysipelas of the scalp, attended with *profuse* uration. That attack lasted three or four months. I had her severe attack last year, after attending a bad case of slough-phagedæna of the penis, scrotum, and groin, from primary ilis. I was not aware that I had any cut or scratch on my r at the time; I used the greatest caution in touching the and did not cut myself at the time; still I had a very pain-ruption of boils afterwards, which lasted three months. I a third attack last summer, and am now suffering from the h.

The eruption is more a purple hard tubercle than a pustule or in some very bad ones they are preceded by a small vesicle, a white areola about the size of a sixpence or shilling, in a case there is some deep suppuration afterwards; but they ally suppurate very slowly and imperfectly.

I intended to have consulted you about it when in Dublin, s I was free from them at the time, I did not wish to trouble you; but this eruption is now becoming more frequent, and appears to be brought on by anything that irritates the skin; a hard ride on horseback is generally followed by several of them. I have tried various remedies, such as mercurial alteratives, with soda; sarsaparilla, and Brandish's solution; and quina (which gave me a headache); I have frequently cut them across with a scalpel, or applied caustic to them, which prevents *some* from suppurating. I was advised to use calomel and James' powder in small doses, with spare diet, which relieved me at the time, but the eruption returned soon after. I was also lately recommended tonics, with porter and nourishing diet; which latter—I mean the porter and full diet—generally bring on headache, so I am afraid of them.

"I have also consulted your most valuable work, expecting to find the same consolatory advice that I have so frequently had from it in fevers and other cases, but I did not find any case exactly corresponding to my own. I have, therefore, taken the liberty of applying to you directly, and laying this statement of my case before you. Let me know particularly as to diet. I used to be very dyspeptic, but of late I feel myself in better health and spirits, only that I am so much annoyed by these *boils, pustules,* or *tubercles.* My pulse used to be 75 to 80; it is now 60."

I advised Dr. Orpen to try the following prescription, recommended by Dr. Erichsen in the *Medical Gazette* of November 14th, 1845:—Liquor of caustic potash, one ounce, and half an ounce of bicarbonate of potash, in seven ounces of water. One table-spoonful to be taken twice a day in half a tumblerful of nettle tea, and the dose to be gradually increased until an ounce is taken at a time. Dr. Orpen persevered for a considerable time in the use of this remedy, occasionally intermitting it, and was at length completely restored to health. He used, by my advice, a generous, but not heating *diet.*

With respect to inoculation of the system by means of morbid animal matter, I have seen frequent instances of it in cases where such inoculation was new to me. A young lady had erythem nodosum of her legs, some of the tumors of which, bei neglected and irritated by friction, ran into superficial pustul Her mother opened some of these with a needle, and, during operation, a drop of the fluid fell upon the back of her mid nger. In ten minutes after she felt a tingling and painful nsation in the unbroken skin of the part, which she had erely wiped and not washed, being entirely occupied with her ughter. The spot became inflamed, and next day an angry ustule, exactly similar to those on her daughter's legs, formed n the finger.

Another remarkable example occurred in my practice while is lecture was being printed. A young lady had been directed apply to her head white precipitate ointment, to destroy some diculi which she had perceived in her hair. Instead of it, the othecary, by mistake, sent her tartar emetic ointment: this s well rubbed into the scalp by her maid, and the effect of it s to produce violent inflammation, followed by a large crop of stules and copious purulent discharge. The pustules afterrds appeared on various parts of her body, and continued to me out for several months. Her mother, also, who had a sore om the burn of sealing-wax on her finger, having dressed her ad, became affected in a similar manner, pustules and boils reaking out over her body, and continuing to reappear, in spite f every sort of treatment, for many months.

LECTURE LX.

PSORIASIS.—POMPHOLYX DIUTINUS.—TINEA CAPITIS.—PRURIGO.

THE next disease of the skin to which I shall call your attention is illustrated by the case of Ellen Farrow, who has been for a considerable time labouring under extensively diffused psoriasis. She was admitted about the beginning of last November, and we are now come to the 10th of December; so that she has been a patient here for nearly six weeks. Her disease is of better than two years' standing, and the eruption covered almost every part of the surface of the upper and lower extremities, the trunk remaining unaffected. The patient, you perceive, is a fine healthy country girl; and though the complaint has lasted so long, her system does not seem to be in the slightest degree impaired—appetite, digestion, and sleep are perfectly good. Now, on examining her soon after her admission, you will recollect that I told you that the duration of the disease, the absence of constitutional irritation, and of irritation in the parts affected by psoriasis, all contra-indicated a mode of treatment which frequently proves highly useful, namely, the antiphlogistic. If called to a case in which the disease was recent, and attended with heat of skin, redness, and itching, I would bleed, leech the affected parts, and put the patient on a spare diet. Even in some cases of a chronic character, this treatment may be employed with great advantage. Here, however, the state of the patient was such as not to require antiphlogistics, and accordingly we put her on the use of Fowler's arsenical solution. By the way, when you give this remedy in private practice, where patients or their friends are very curious in scanning your prescription, you may, in order to prevent alarm, or have the action of the medicine interfered with, write on your prescription, "Liquor mineralis Fowleri."

I mention this case of Farrow's chiefly for the purpose of showing the extent to which the arsenical solution may be carried.

ar in mind I do not mean to boast of the quantities of medi-
ie my patients swallow. Some persons appear to think that
re is something very brilliant in prescribing enormous doses:
should, however, be very sorry to make such experiments.
senic is a very powerful remedy, and its effect on diseases of
skin can be amply secured by moderate doses; where these
l, it is very often from not continuing the use of the remedy
a sufficient length of time. Latterly this girl has taken ten
ps of Fowler's solution three times a day; and, as she is
tting well, I do not intend to increase the dose. We began
th three drops three times a day; after a few days this was
creased to five, and then to seven drops three times daily.
ie then began to take ten drops three times a day; but after a
w days, having got an attack of shivering, followed by symp-
ms of feverish excitement and herpes labialis, we stopped the
senic for five days, and then began to give it again in small
ses, which were gradually increased until we came to the
antity she is taking at present. Whenever you have a patient
nder the use of arsenic, you must never omit making daily in-
uiries as to the state of the head and stomach: if the patient
mplain of gastrodynia or nausea, if there be pain or giddiness
head, or if, these being absent, a state of feverishness or
neral nervous excitement supervenes, it is a proof that the
medy has been pushed sufficiently far, and under such circum-
ances you should suspend or give up its employment. In this
se, being unwilling to give up the use of arsenic, as it appeared
be curing the patient, I merely suspended it for a few days,
d then had recourse to it again. In order, however, to prevent
from acting unfavourably on the stomach, I have latterly pre-
ribed it in the following form:—

℞. Liquoris Arsenicalis, min. x.
Aquæ destillatæ, f℥j.
Tincturæ Opii, min. x.
Spiritus Lavandulæ compositi, f℥ss.—Fiat haustus.

his appears to agree very well with the stomach; and as she
nproving very rapidly, I intend to continue it for some time
hout increasing the dose.

he only other point worthy of remark in the case is, that we observed in it a phenomenon connected with the state of the skin, such as usually occurs when a patient is using sulphur or sulphurous waters for the cure of chronic cutaneous affections. After they have been taking these remedies for some time, they experience a slight exacerbation of symptoms, and complain that the eruption is growing worse. This, however, should never induce you to give up the remedy without further trial; for this temporary aggravation generally precedes the disappearance of the disease.

The following case is an admirable illustration of the advantage derived from treating diseases of the skin on constitutional principles:—

Early in the year 1846, Mr. Pakenham, of Henry Street, consulted me respecting a young clergyman who was annoyed by a redness occupying the skin of the upper lip. This redness was permanent, but liable to certain remissions and exacerbations, dependent on the state of the weather or the effects of diet. It was accompanied by a slightly elevated state of the engaged portion of the skin; but it had not the elevated pimples of acne, or the suppurating tubercles of sycosis. It might, perhaps, be termed psoriasilabialis, and when much inflamed, secreted an increased quantity of epidermis. It annoyed him much, and prevented him from using his razor with comfort. He was very anxious to have this disfigurement removed, and had made use of many remedies, both general and topical, without benefit. As the disease had lasted several years, and had resisted all the remedies which had been tried, both by London physicians and myself, I advised him to go to Aix-la-Chapelle for the purpose of using the sulphurous waters. The German physician whom he consulted there considered that the disease depended upon a strumous origin, and directed him not to use the waters, but to try a course of cod-liver oil. This remedy agreed well with his constitution, and after some time he was able to consume two ounces of it daily, which, in about two months, effected a complete cure. That the German physician took a correct view of its nature I have no doubt, as several members of my patient's family have suffered from scrofulous diseases. It may be well to mention that the cod-liver oil was made into an emulsion with syrup, mucilage, and orange-flower water, in which shape it is comparatively palatable.

Since this occurrence I have often had success in the treatment local diseases of the skin which I suspected to depend on a rofulous taint, and have thus cured obstinate cases of sycosis, npetigo, and psoriasis. I may add that, in all such patients, I ave combined with the internal remedy the insertion of one or ore issues at a distance from the part of the skin affected; and n sycosis I follow Alibert's plan of maintaining an eruption on e arm with tartar emetic.

In certain diseases of the skin, particularly those allied to soriasis, I have found the use of gelatine baths of the greatest ssible service. Two gallons of size may be added to each arm bath for an adult, or, if the odour of even fresh size is bjectionable, a similar quantity of isinglass, or calf's foot jelly ay be used. A course of such baths, particularly in summer, ill be found a most valuable auxiliary in curing dry and scaly iseases of the skin.

A patient of mine was affected with psoriasis of the scalp for everal years. It was extensive but not severe, and did not nterfere with the growth of the hair. He sought no remedy ntil it encroached on the forehead, and thus disfigured him. Ie was cured by using hot air sulphur baths for fifteen or twenty ninutes daily for a month, and applying the following ointment o the roots of the hair every night at bed-time: Biniodide of nercury, one scruple; prepared lard, one ounce; oil of lemon, ive drops. An oil-silk bathing cap was worn at night, and the intment was not washed out in the morning.

In cases of psoriasis of the scalp and ears, back of the neck nd forehead, cases which are often of an extremely obstinate nd troublesome character, and occur frequently in young emales, I have seen Sir Philip Crampton adopt with success the ollowing treatment:—A sixteenth of a grain of corrosive sublinate, dissolved in half a drachm of spirit of wine, is to be taken hree times a day, in four ounces of a mixture composed of equal arts of infusion of yellow bark and decoction of sarsaparilla, ogether with Donovan's Liquor Cinchonæ, and the fluid extract f sarsaparilla. Along with this internal treatment, he advises he application to the parts of dilute citrine ointment, with the ddition of about one-third of the unguentum ceræ albæ. The bove internal remedies are often useful in scrofulous ophthalmia. he late Dr. Colles likewise used the corrosive sublimate in this affection, both internally, and as a lotion externally, dissolved in spirits of wine.

The effect of nitrate of silver in the case of psoriasis at present under treatment, is well worthy of your attention. You may recollect that when this patient, who is a strong and otherwise healthy man, was admitted seven weeks ago, he presented a specimen of *psoriasis diffusa* of the worst character.

His scalp, extremities, and trunk were almost totally covered by its inflamed and scaly patches, of all sizes and in all stages. It is particularly to be remembered, that scarcely a day passed in which new spots of the disease did not make their appearance, as was obvious from the great number of minute and recently-formed patches which were intermingled with those of older date.

Having previously cleared away as many of the scales as possible, by means of ablutions with yellow soap and water, and having thus, to a certain extent, exposed the diseased portions of the skin, I directed all the spots in succession, and also the skin immediately around them, to be rubbed with nitrate of silver, the surface of each being first rendered slightly damp, in order to render the application more active. The proper application of the caustic to such numerous spots, and to so extensive a diseased surface, was a business which required much attention and trouble; which, added to a fear that this process might excite excessive cutaneous irritation, if too generally and too suddenly applied, prevented us from touching all the spots before the end of the fifth or sixth day. The effect of this treatment has been an amendment more rapid than I had anticipated. The newly-formed and recent patches of the disease yielded to the first application, and presented, when the black crusts it formed had fallen off, a healthy surface. The older and more extensive spots, as might have been expected, proved much more obstinate. In every case, however, their further increase in size has been prevented, and most of them have finally yielded to repeated applications of the caustic. One very large and inflamed spot on the fore-arm was first leeched and poulticed. Judging from the progress already made, I think that the cure will be completed about the end of the ninth week. It remains to be seen whether it will be permanent. One circumstance is worthy of remark—that the tendency to produce new patches of the disease, which existed when this patient was admitted, has in a great measure

ased, and latterly very few have been generated. On the whole,
en, this method deserves a further trial, and in recent cases it
ay perhaps even succeed in altogether stopping the progress of
e disease. Of course I do not mean to recommend it to the
clusion of the other modes of treatment recommended by Dr.
uffin and M. Biett, and which you have so often seen successful
this hospital: I merely propose it as a useful adjuvant in
stinate cases.

It has been stated by Dr. Duffin, in his essay on cutaneous
iseases, that scaly eruptions are not contagious. The same
pinion is likewise maintained by Bateman. A fact I had an
pportunity of observing seems, however, to prove that scaly
iseases may become communicable by contact under certain
rcumstances. A gentleman of cleanly habits, for several years
sident in one of the healthiest situations of this city, was sub-
ct to psoriasis palmaris for many years previously to his coming
ere. This I mention to show that the disease did not originate
anything connected with the house or its locality. I was
terwards called to see his butler, who had contracted an exten-
ve psoriasis on the back of his hand, and which he himself
tributed to his wearing of his master's old gloves. This fact
d not make much impression on my mind until about two
onths afterwards, when I found that the housemaid in the
me family had also contracted the disease, in the form of
ily spots of various sizes on the fore-arms. This she attri-
ted to contact with her master's linen, making his bed, &c.
e housemaid and butler, it is necessary to mention, were not
ations.

The most extensive case of psoriasis diffusa I ever saw occurred
a boy after sleeping many nights without a shirt on the wool
med *pitch-marks*—the wool of the sheep in which the owner's
tials had been stamped with pitch, and bought by the poor
various purposes, such as stuffing cushions, &c.; in this case
m doubtful whether to attribute the complaint to the irritating
lities of such wool, or to its being, perhaps, in part taken
m sheep labouring under disease of the skin. That cutaneous
eases may be communicated by other animals to man is well
wn. I myself have seen two instances in which an entire
ily of children were infected with a disease resembling the
, from playing with a mangy dog.

The case of the boy who was admitted into the hospital in the beginning of last September, labouring under a disease of the skin called *pompholyx diutinus*, is well worthy of your attention. This boy was 14 years of age at the time of his admission, and although his frame was slender and his constitution apparently delicate, yet, with the exception of the cutaneous disease, he had enjoyed for many years an uninterrupted continuance of good health. The eruption had lasted five years, during which time the succession of bullæ had seldom ceased. When he came under our observation, the bullæ occupied, in very considerable numbers, not only the face and extremities, but also the trunk, and were in various stages of progress—some healing after having burst, some of a large size and unbroken, while others were small and recent.

This disease is well described by Bateman, who makes some judicious remarks upon its treatment; but I think that Biett's description is not only fuller but more exact. From the observations of these authors, however, you cannot form an idea of the occasional severity of pompholyx diutinus, of which I have seen two cases in young men, where the irritation and suffering produced by the constant exposure of large portions of skin denuded of epidermis had operated most unfavourably on the general health, almost banishing sleep, and reducing the patients to a state of great debility. As these cases had proved extremely obstinate, and had not yielded to any of the modes of treatment recommended by Bateman and Biett, my confidence in their plans was naturally shaken, and I determined, when opportunity offered, to have recourse to a new method of treating this complaint.

When this boy, therefore, came under my care, instead of using either the constitutional or local remedies which I had tried before, I directed all the bullæ to be opened with a lancet, and the denuded surface of the corium to be touched with a stick of nitrate of silver. The caustic was applied also to the skin around each bulla for the breadth of a line; and the nascent pimples which indicated the formation of future bullæ were all subjected to the same treatment. He was then washed and got clean linen. This single application of the nitrate of silver had not merely the effect of entirely destroying the morbid action in the portions of the skin which were at the time affected, but, is very remarkable, no fresh bullæ have since made their rance, although nearly four months have elapsed. The part of the surface which required a repetition of the process he palm of the hand, where the thickness of the epidermis red it difficult to expose the diseased surface of the corium full action of the caustic.

though the results of a single case, however successful, do ustify us in concluding that the method of treatment adopted prove equally efficacious in eradicating every similar erup- yet the benefit obtained was so striking, that we may with dence consider nitrate of silver as a useful addition to the peutical agents already in use for the cure of this disease. fact that an affection of the skin so general, and of such continuance as to merit the name of a constitutional disease, ld be cured by local means alone is not so easy to explain. he fluid generated within the bullæ is said not to be con- us, we must refer the cure to the simultaneous destruction ll the parts in a state of morbid action—a morbid action h would have been otherwise propagated to other parts of kin by the sympathy of continuity, as it is termed.

the 15th volume of the *Edinburgh Medical and Surgical nal*, I observe that, in a paper upon *yaws*, Mr. Mason says as derived great benefit from the direct application of nitrate ilver to the yaw tubercles; and in one recent case, this ment being continued for a few months, " the papulæ dis- ared, and no other tubercular yaws were formed." It ars from a subsequent experiment that although the disease thus, as it were, cut short, yet the patient's constitution not secured from a future infection, as it would have been the yaws been allowed to run their usual course. Here, fore, we have another example of a local application to the preventing the development of, and as it were suppressing, stitutional disease.

e have lately had in the hospital a disease of the skin , in the form of eruption and in being communicable by ct, bears a striking resemblance to yaws: I mean *button y*.

is case presented one fact which is worth bearing in mind, mparing button scurvy either with the yaws, sibbens, or lis. While under the influence of an alterative course of mercury, which had been continued long enough to produce an evident action on the gums, the patient's right eye became red and inflamed, and, in spite of local depletions, a violent attack of iritis was formed, and only yielded to salivation rapidly excited by large doses of calomel. The salivation produced a speedy diminution in the button scurvy, and soon cured it also.

I have next a few practical observations to make upon the dry, scaly variety of tinea capitis, which has been so well described by Plumbe, in his *Practical Treatise on Diseases of the Skin*, fourth edition, pp. 139, 140.

This species of ring-worm or dry tetter is very contagious, and sometimes makes its appearance in one or several spots on the scalp, face, or other parts of the skin, but seldom is observed on the lower extremities or abdomen. It scarcely ever remains for any great length of time fixed in any part except the hairy scalp, where it is apt to locate itself and become permanent, its duration often extending through a great number of years, or even a whole lifetime. I recommend your attention to the following points :—

1st. When the disease is of long standing, always insert an issue in the arm before you attempt its cure. I have seen water on the brain, and other fatal consequences, from the neglect of this precaution.

2ndly. If this disease has clearly originated from contagion, and no other evidence of derangement of the general health can be detected, we must not, from the mere presence of the cutaneous affection, infer a constitutional taint, and must avoid the common error of making the poor children undergo a course of alterative medicines.

3rdly. This affection, originating in contagious matter applied to the skin, cannot, like some varieties of lepra and psoriasis, to which it often bears a great resemblance, be cured by internal medicines, such as mercury, arsenic, and iodine, given separately or in combination, as in Mr. Donovan's preparation.

4thly. When it occupies the hairy scalp, the common procedure of shaving the head is injudicious, for it adds to the irritation of the skin; and the scalp can be sufficiently exposed by cutting the hair as close as possible with a sharp scissors.

5thly. The great object is to get rid of the morbid action which oing on, and which consists in an inflammation of the rnal surface of the corium—an inflammation occurring in s, and giving rise in the first place to an increased secretion pidermis, which produces the scaly appearance of the parts ted; and in the second place, to a very slight and scarcely eptible oozing of moisture, which immediately dries into es, and thus escapes notice, being mingled with the scurf ned by the detached portions of morbid epidermis.

thly. The cure must be accomplished by removing these les, as far as that can be done by diligent ablution, without ng any irritating degree of friction; and when the diseased tion of the skin has been thus exposed, we must next have ourse to some application which will destroy the morbid reting surface. Formerly this was attempted by means of an lless variety of complicated formulæ, each of which had its ocates; the list may, however, be now reduced to a few ple remedies, and in truth, with nitrate of silver, sulphate copper, or strong tincture of iodine, every case of this disease y be cured.

thly. I never use the solid lunar caustic, or sulphate, but fer a solution of ten, fifteen, or twenty grains to the ounce, he case may require. As to the application of this solution, ill not do to apply it, as is generally done, with a camel's pencil, *for it must be strongly rubbed into each spot,* for h purpose a small bit of sponge, covered with fine linen, and to the end of a quill or slender stick, should be employed. n a large portion of the scalp is affected, it will require some verance to apply this lotion in an effectual manner.

hly. An application of this nature, when effectually done, t not be repeated oftener than once a week.

hly. Immediately after it, the whole scalp must be covered a spermaceti dressing, and the spermaceti must be renewed east four times daily, so as to keep the head constantly stened with it. The head is not to be washed for three after the application of the caustic, or of the tincture of ne; but then it may be well, but very gently, washed with w soap and water twice a-day, taking care to cover, as re, with a spermaceti dressing after each washing.

n scaly diseases of the skin, it is quite surprising how much cure is facilitated by keeping the affected parts constantly smeared with spermaceti, oil, melted suet, or even candle grease. Without this aid, the use of caustics will often disappoint the practitioner.

10thly. When the above precautions have been taken the cure will advance rapidly, and each succeeding application of the caustic solution or of the tincture may be less severe.

I have already mentioned that danger may arise when cutaneous action long-continued is suddenly checked. I saw lately a very melancholy example of this. A gentleman, aged about twenty-two years, contracted a rather severe cold in his chest, which rendered confinement to his room necessary for a few days. He was impatient, and applied a very strong blister to his chest, which effectually cured the pectoral symptoms, but left a sore raw surface. This he neglected to dress properly, and soon betook himself to his favourite horse-exercise, in which he indulged freely, without any other bad effects than further irritation of the blistered part, which, in the course of a few weeks, became converted into an actively discharging surface. After some time, additional neglect and improper irritating applications so increased the inflammation, that at one time it assumed a very threatening aspect, when a plan of treatment was laid down, and followed up with perseverance, and ultimately, after the lapse of several weeks, completed the healing of this extensive and ill-conditioned sore. On the very day after the attainment of this apparently desirable object, this gentleman, who had hitherto felt his general health quite good, was seized with a difficulty of breathing and faintness, both of which increased from hour to hour, and in about twelve hours from the beginning of the attack I saw him moribund, with cold clammy skin, hippocratic countenance, and an irregular fluttering pulse. The chest everywhere sounded well, and there was an absence of all physical signs of pneumonia or bronchitis, while an examination of the præcordial region left no doubt of the existence of effusion in the sac of the pericardium. He died in less than twenty-four hours from the occurrence of the first symptom.

It never answers to rub the affected parts of the scalp with solid nitrate of silver or sulphate of copper; for the irritation thus produced frequently gives rise to inflammation, causing a crop after crop of large pustules, or even small furuncles, an occurrence which may interrupt the cure for months; although ally, when this disposition to form pustules has subsided, nal disease of the scalp will be found to have been cured. ewise important to remark that when the scaly tetter or n of the scalp is chronic, the solution of nitrate of silver lphate of copper can be much more effectually applied e hair is about a quarter of an inch long, than when the s been recently shaved; for in the former case the may pour from a phial some of the solution successively affected portions, and the hair will prevent the solution off until he rubs it well into the scaly surface with the ponge tied to a stick: of course he must so place the head that the portion on which he pours the solution be uppermost. About half a drachm may be poured on e. When these solutions are diligently applied at proper s, I have never known them to fail in the scaly tinea, sequently in that disease I have had no occasion to have to Mr. Donovan's solution of iodine, arsenic, and , which has, however, been successfully exhibited by

nk it right to add, as a caution, that a solution of ten o the ounce, rubbed over the affected spots with a camel's cil, produced in one little girl a sudden inflammation of le scalp, causing many sloughing boils, and such a morbid as, it is true, perfectly cured the original disease, but, time, totally destroyed the hair on many parts of the After two years, however, the hair again grew partially ese spots, and at the present moment the new crop so much on the increase, that I am in hopes the ty will be but partial. Since this untoward occurrence I ommence the treatment with a much weaker solution.

me now to direct your attention to two cases of *prurigo* ave been recently admitted. The first is that of Jane , a woman advanced in life, but of tolerably good con- n, considering her age, station, and circumstances. hree months before admission, a rash appeared over her egs, and body, which was preceded and accompanied by the stomach, head, and limbs, with recurring rigors. as we can learn from her description, this appears to en urticaria; of this, however, we cannot by any means be certain; and, besides, it is of little consequence, as prurigo may come on without it. She is at present labouring under prurigo senilis, not thickly disseminated, but still a source of constant annoyance to her, from the intolerable itching it produces. Several of the papulæ have formed dark red crusts, but this is in consequence of their bleeding from being scratched.

This affection has been so well described by writers on cutaneous diseases, and is so easily recognized, that I shall not take up your time in detailing its characters; a few circumstances connected with treatment, however, should be mentioned as deserving your notice. In the first place, I may observe that prurigo is a most harassing complaint, and, if not checked, has a tendency to undermine the constitution by disturbing the patient's rest. The warmth of the bed-clothes, by increasing the vascularity of the skin, occasions an aggravation of symptoms; the patient passes a miserable and restless night, and rises in the morning quite unrefreshed. This, in process of time, gives rise to a kind of febrile condition of the system; the mouth and fauces become dry; the appetite is impaired; the secretions deranged, and debility and emaciation gradually produced. It is a disease which has broken many a constitution, which, previously to its accession, was to all appearance unimpaired and healthy.

Prurigo has been confounded with common itch, but if you examine the parts it occupies, you will easily distinguish them. It is most likely to be confounded with the small vesicular itch, where the vesicular papulæ (this is the most expressive term I can think of) are extremely minute. There is a papular itch, and there is also one which is intermediate between the vesicular and the papular; it is with the latter that prurigo is most apt to be confounded. The difference between them, however, may be recognized by observing the parts of the body on which they appear. Itch generally attacks the extremities, and particularly the insides of the joints and the spaces between the fingers. Prurigo, however, does not occupy the same situations. If you examine this woman, you will not be able to find any trace of the eruption about the joints or between the fingers—and this circumstance is of itself sufficient to make the distinction, for itch would not have lasted for three months without attacking these parts.

I may also observe that prurigo senilis is generally accompanied
derangement of some of the most important secretions of the
dy, but particularly of the urine. Its appearance is in many
stances preceded by a scanty flow of urine, and it is frequently
companied by the deposition of a copious pinkish white sedi-
ent, which is the lithate of ammonia. This observation is
rthy of attention, because it furnishes us with a hint towards
e treatment, of which we may sometimes avail ourselves with
eat benefit to the patient. You will, in such cases, often effect
great deal by the use of diuretic medicines—as cream of tartar
th decoction of juniper berries and squill; or with the more
imulant diuretics—as turpentine and cantharides. It will be
so good to vary these remedies according to the circumstances
the case, and they should be always given in combination with
edicines calculated to act beneficially on the digestive organs.

In this case we have given decoction of sarsaparilla with nitric
id for the last two days; before this, we gave cream of tartar
ith powdered bark. These are some of the best medicines
hich can be used internally in the treatment of prurigo senilis.
is, however, a very obstinate disease, and you will be often
liged to try many internal and external remedies before you
n hit on one that will prove serviceable. Cooling diuretic
erients, aperients combined with tonics, and the decoction
sarsaparilla with nitric acid,—these are the chief internal
nedies; as to external ones, they are extremely numerous.
the present case we have, in the first place, directed the
ient's body to be washed with a lather of soap and warm
er every night and morning. The water for this purpose
uld be used as hot as the patient can bear it, and a very
brush or sponge should be employed.

n prurigo, a vast deal of good has been done by merely
hing the itchy parts with soap and warm water; how it acts
nnot say, but I have seen a great deal of advantage derived
n a long-continued perseverance in its use. After this you
y have recourse to more powerful applications—such, for
ance, as sponging the parts at bed-time with hot whisky
laudanum, a pint of the former to a drachm of the latter.
re you have the stimulant effect of the whisky, the narcotic
he laudanum, and the peculiar action of heat on the skin, all
nbined, and calculated therefore to make a very decided

impression. How this effect of heat is produced I cannot tell, but we all know that, whether applied in a moist or dry form, it exercises a powerful influence over the vascularity and nervous vitality of the skin. Neither can I tell you what description of cases are most likely to benefit by it; some cases of prurigo senilis are much relieved by warm applications, others are not; you should, however, always make a trial.

There was one application used in this woman's case, to which I shall briefly call your attention. A drachm of acetate of lead was dissolved in two ounces of wine vinegar mixed with the same quantity of water, and this was rubbed up with olive oil so as to form a liniment. Mr. Nalty, who mixed up the ingredients, says that three ounces of olive oil were absorbed. You are aware that oil conducts itself, with respect to the metallic oxides, as it does with the alkalies. This formed a liniment, which, when allowed to stand, separates; but its ingredients are at once miscible by shaking the bottle. From its use the woman has derived great relief, and I can recommend it to you as one of the best applications in prurigo.

Before concluding, I just wish to remark that, in eczema and many other forms of skin disease where itching is a troublesome symptom, I have used with very decided benefit a lotion composed of eight ounces of decoction of poppies, and two or three drachms of solution of isinglass.

LECTURE LXI.

PURPURA.—THE HAIR.

ases presenting some points of deep interest and novelty recently come under my notice; in both instances the rs were young men of good constitution, who in the prime free from any discoverable organic affection, and without nown predisposing cause, have fallen victims to profuse tractable hemorrhage.

se two cases will be found to present many points of ity; indeed, they agree in their most striking features ach other, while they do not correspond either with any varieties of purpura as described by Willan, or with any f hemorrhage noticed by other authors. This identity of nd the remarkable circumstance that each was accompanied ash not at all like *purpura*, but very closely resembling the f measles, has led me to look for a name expressive of the haracters of the disease. The great obstinacy and fatal of the hemorrhage rendered obvious the appropriation of rm hemorrhagicum to the species, while the occurrence ash appearing on the skin at a certain stage pointed out rm exanthema; accordingly, I have fixed on the name *ema hemorrhagicum.*

eruption, as I have said, resembled that of measles; it ot, however, the crescentic outline of the rubeolous rash, nsisted of roundish spots, almost exactly similar in apce to the red efflorescence which we so often see in macutyphus. The constitutional symptoms, however, as we ee, altogether differed from those of fever in general, and in particular.

g of opinion that the disease I am about to describe has en accurately observed by preceding authors, and having d to give it a new name, I think it right to read for you ount of purpura hemorrhagica, as given in the *Cyclopædia ctical Medicine,* in order to give you an opportunity of judging whether I am justified in the claim made for the admission of an additional disease into our nosology.

"In *purpura hemorrhagica*, 'the petechiæ are often of a larger size, and are interspersed with livid stripes and patches, resembling marks left by the strokes of a whip, or by violent bruises. They commonly appear first on the legs, and at uncertain periods afterwards on the thighs, arms, and trunk of the body, the hands being more rarely spotted with them, and the trunk generally free. They are usually of a bright red colour when they first appear, but soon become purple or livid; and, when about to disappear, they change to a brown or yellowish hue; so that, as new eruptions arise, and the absorption of the old ones slowly proceeds, this variety of colour is commonly seen in the different parts about the same time. The cuticle over them appears smooth and shining, but is not sensibly elevated; in a few cases, however, the cuticle has been raised into a sort of vesicle, containing black blood. . . . The gentlest pressure on the skin, even such as is employed in feeling the pulse, will often produce a purple blotch like that which is left after a severe bruise.'* The nature and seat of the small effusions of blood which constitute the petechiæ, from which the vibices and ecchymoses differ chiefly in magnitude, are well explained by the anatomical researches of Rayer. 'On dissecting the skin,' he observes, 'it is found that the petechiæ and ecchymoses do not at all occupy the same situation. Some are very superficial, and seated on the surface of the rete mucosum; others occupy the alveoli of the cutis; the largest and darkest-coloured have their seat under the skin in the cellular tissue. In these the blood is found coagulated, but it is fluid in the smaller and more superficial effusions. The vascular ramifications contiguous to these minute ecchymoses are in their natural state. The blood is easily removed by washing or maceration.'" †

Having made these preliminary observations, necessary for the better understanding the peculiarities of the disease we have to describe, let us now proceed to the cases themselves.

John Coghlan, aged 29, appearance robust; previous health vigorous, and habits temperate. This man was admitted into the Meath Hospital on December 7, 1837, and stated that on the 1st of that month he had been seized with rigors, headache,

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* Bateman, *Synopsis*, p. 105.

† Rayer, *Malad. de la Peau*, ii. 162.

, which had continued with lassitude to the time of ion. On the day of his entrance the following report of him:—headache, cough with expectoration, and ack; skin hot, but free from maculæ; bowels con- tongue dry, rough, and brown; pulse 80, hard and urine muddy, and sleep disturbed. His head was be shaved, leeches to be applied behind each ear, and rile aperient of salts, senna, and scammony to be ed.

ort on the next day was, that the bowels were twice vacuations black; had vomiting of dark fluid; tongue and rough, and pulse 70, hard and thrilling; head- inues. He was ordered a blister to the epigastrium, ssed with morphia ointment; twenty-four leeches to behind the ears; and the following:—

℞. Calomelanos, gr. ss.
Sacchari, gr. ij.
Misce ut fiat pulvis, quartis horis sumendus.

morrhagic pulse and dry tongue continued; the urine sited a sanguineous sediment, and the dark colour of was found to depend on their admixture with blood. diluted nitro-muriatic acid were administered every rs, during two days; this medicine had no good effect; an to ooze from the gums and inside of mouth; hemop- e on; the urine and feces retained their sanguineous e; the pulse still hard and thrilling, and the tongue as r. Citric acid was now employed without benefit; the emorrhage continued, and the thrilling pulse was with violent and tumultuous action of the heart. He ed the following draught:—

℞. Tincturæ Digitalis, min. xx.
Tincturæ Opii, min. v.
Misturæ Amygdalarum, f℥j.
Misce ut fiat haustus, quartis horis sumendus.

seventh day from that on which the bleeding from the was perceived, an eruption of rather large red spots on the arms and thighs; the colour of these was by pressure, but instantly returned on its being with- All the symptoms progressed; the alvine and urinary discharges became very sanguineous, and the tongue and p retained their striking characters. The digitalis and op were continued during five days, and effected no diminutio the quantity of blood discharged, and little, if any, chang the state of the arterial system. Digitalis was next presc in combination with diluted sulphuric acid, and still wit success. The foxglove was then omitted, and diluted sulpl acid, in large doses, with sulphate of magnesia, was substit for it; still hemorrhage advanced daily, the pulse retaine constant thrill, and the tongue its unalterable dryness.

The cutaneous spots faded and disappeared; and at time, the disease advancing under the cautious administr of so many remedies, and the pulse still acting with inces thrill, it was determined to try the effect of a small blee from the arm. Blood was drawn to the extent of six ou and the mixture of salts and sulphuric acid was contin The abstracted blood presented a firm coagulum, some buff, a large proportion of serum. The general symptoms unaltered. Bleeding was twice resorted to, after this, to same amount; and blood withdrawn at these times prese firm coagula, with most distinct cup and buff. The blee although it seemed to have no *injurious*, had no *beneficial* e The effusion of blood from mucous surfaces continued; tongue was still dry and rough; the pulse hard and thrill the action of the heart retained its violence, and dicro pulsations became evident at the wrist. Copious epistaxis added to his symptoms; acetate of lead with opium, and ac of morphia with quina, failed successively, as also did o turpentine administered internally. The patient became sanguineated, emaciated, and dreadfully weakened; con vomiting of blood set in, and at last, on the 29th of Decem after an illness of twenty-nine days, convulsions and death cl the scene.

A careful post-mortem examination afforded no explan of the fatal hemorrhage; no organic lesion was discovered, the only morbid appearance was a number of minute red dispersed over the surface of the mucous membranes.

For the sake of perspicuity I shall briefly recapitulate most important features in the above case, before procee to the consideration of its character. With regard to ca predisposing or exciting, I can assign none to account for the disease. The patient had been strong and healthy up to the accession of his illness. He had never been accustomed to unwholesome diet, nor had he ever indulged in habits of intemperance. Febrile symptoms ushered in his malady. On admission into hospital, his two most marked affections were, an exceedingly dry and brown tongue, and a hard and thrilling pulse. (The thrill was not dicrotous, though dicrotous pulsations were afterwards perceptible; it conveyed the sensation of small, sharp vibrations accompanying each beat—a kind of wiry trembling.) These signs continue; bleeding from the intestines and urinary system quickly supervenes; this increases, and at length the whole mucous system of the patient becomes the seat of copious hemorrhage. A peculiar exanthematous eruption appears upon the skin in this stage of the disease, lasting during five days, and never presenting any signs of extravasation. During twenty days the hemorrhage obstinately advances, defying alike an astringent, a sedative, and an antiphlogistic treatment, and at last, triumphant over all the opposing effects of medicine, hurries its victim to an early grave.

I request that you will particularly bear in mind three circumstances in this disease—namely, the permanent dryness of tongue; the extraordinary thrill and hardness of pulse, yielding only to the withering influence of approaching death; and, lastly, the peculiar nature of the cutaneous eruption—as these will form important points in the subject of classification.

Case II.—Michael Parker, aged 34, a labourer, of strong muscular development and sanguineous temperament, was formerly much addicted to spirituous potations, but of late has in a great measure abstained from their use; for several years has been subject to repeated bleedings from the nose, generally preceded by cold, a sense of heaviness and sometimes pain in the head, always relieved by venesection: whilst in a state of profuse perspiration fourteen days ago, he took some cold water, and was immediately attacked with rigors, slight nausea, and considerable lassitude; in the course of a few hours, bleedings from the nose, mouth, and bowels came on, continuing to flow with vigour till venesection was performed, when instant relief and complete cessation of the epistaxis were the consequences; two days afterwards there was a return of the bleeding from the nose and the other symptoms above mentioned, when the same operation was resorted to, and with considerable efficacy; since then up to the present time he has had frequent attacks, but of a milder character. From the first attack he thinks not less than one gallon of blood must have been lost.

Since his admission into hospital, he has been spitting up blood of considerable consistence, clotted, of a dark colour, and mixed with frothy sputa. His general appearance is bloated, particularly about the face; the skin being slightly yellow, better marked in the conjunctiva of both eyes than elsewhere; the nose is clogged with blood; tongue, teeth, lips, gums, all the upper and posterior parts of the mouth are covered with a hard, black substance, evidently coagulated blood. On its being removed from a portion of the gums, they commence bleeding afresh, the blood apparently oozing out from a number of minute apertures, not larger than the perforations produced by the prods of pins; percussion and respiration natural over all parts of the chest; some epigastric tenderness, but no pain induced by pressure over the hepatic region, neither is there any evident enlargement of the liver; bowels confined; stools have latterly been of a black colour, being sometimes mixed with a quantity of blood; has no appetite; pulse 48, full, hard, and thrilling; respiration slow and easily performed.

Applicentur hirudines sex epigastrio, et solutis
aluminis saturata dentibus linguæ, &c.
℞. Sulphatis Magnesiæ, ʒvj.
Acidi Sulphurici diluti, fʒij.
Infusi Rosæ, f℥viij. Misce; sumat unciam secundis horis.

3rd.—Leech-bites bled profusely, affording much relief to the pain in epigastrium; lost but a small quantity of blood from the mouth since yesterday; had some sleep; bowels costive; pulse 52, full, strong, and bounding.

Repetatur mistura infusi rosæ, &c.
Adhibeatur enema emolliens statim.

4th.—The stools produced by the injection were free fro blood, but of a dark colour and very fœtid odour. A return the epistaxis occurred this morning, much more copious th for some time past; in the course of about half an hour a pi lorid red blood flowed from the right nostril, which, when head was inclined backwards, trickled down the œsophagus, ›ugh the posterior nares. His countenance has become ious; cheeks livid, and respiration more hurried; pulse 52, ›ng, full, and at present compressible.

Omittatur mistura ut supra præscripta.
R. Acetatis Plumbi, ʒss.
Opii in pulvere, gr. ij.
Pulveris Glycyrrhizæ.
Mucilaginis, āā, quantum sufficit ut fiant pilulæ xvj, quarum capias unam omni horâ, et post quatuor doses, unam tertiis vel sextis horis.

:h.—After much trouble and difficulty, the bleeding from the was checked by plugging up the nostril with lint dipped in ıstringent solution; since then it has not returned. Over surface of the body an eruption, ushered in by a tingling ıation resembling the sting of nettles, has made its appear- ›, more advanced on the thighs, left arm, tips of the shoulder, back of the neck, than any other part, and is of a dark red . Pulse slow, full, and strong; bowels confined.

Repetantur pilulæ. Habeat enema emolliens.

:h.—Has had no recurrence of the bleeding since the 4th ınt; was last night seized with sickness of stomach and iting of dark-coloured fluid, resembling the colour of catchup, depositing a coffee-ground sediment. From the bed and ›ce of the body generally there is exhaled a peculiar disagree- odour; the eruption is fading, and the skin presents a dusky w colour. Passes each night in sound sleep, and seems much inclined to remain in that state the entire day; com- ıs of urgent thirst and total loss of strength, being unable 'alk without assistance. The liver has evidently become ›ased in size since admission; no pain, however, is caused ressure. Tongue furred and quite dry; pulse 68, thrilling; ›ls regular; stools not tinged with blood; urine natural.

Omittantur pilulæ; applicetur vesicatorium magnum hypochondrio dextro.
℞. Acidi Nitro-muriatici, fʒij.
Decocti Hordei, lb. j. Misce; consumatur quotidie.

9th.—A considerable bleeding from the nose came on during the night; of its occurrence, however, he is quite unaware; the sheets and bed are stained of a florid red colour, and there is also on them a quantity of blackish matter similar to the coffee-ground sediment ejected from the stomach on the 8th. The fœtor is greatly increased, and can be perceived at the distance of several feet from the bed. Eruption has in some measure disappeared from the body, but still remains on extremities; tongue the same; pulse 68, bounding and vibrating.

Omittatur mistura Acidi Nitro-muriatici.
Admoveatur vesicatorium magnum toti abdomini.
℞. Olei Terebinthinæ, min. x.
Mucilaginis, fʒj.
Sacchari albi, ʒij.
Aquæ, f℥ss; misce, sumatur omni horâ.
Habeat Vini rubri f℥viij.
A pint of chicken-broth daily.

10th.—Blood continues to flow from anus; on examination, the parts seem excoriated, the slightest pressure causing the most excruciating pain; no recurrence of the vomiting or epistaxis has since happened. Tongue brown, parched, and rough; pulse the same; respiration slow; urine natural.

Admoveatur hirudines sex ano. Repetantur haustus.

11th.—Leeches produced a copious flow of blood; had one costive stool mixed with blood this morning. Pulse 66, a little softer; abdomen soft and free from pain; eruption has almost disappeared from the body; is losing strength very fast.

℞. Pulveris Rhei, ℈j.
Sulphatis Magnesiæ, ʒss.
Sulphatis Potassæ, ℈j.
Olei Terebinthinæ, fʒj.
Aquæ Menthæ Piperitæ, fʒj.
Misce; fiat haustus statim sumendus. Repetantur alia.

12th.—Continues to pass blood and the coffee-ground sediment from the bowels as hitherto; is remarkably heavy and stupid; has no appetite, but great thirst; countenance pale, and surface of the body assuming a blanched hue. Pulse 68, stro and thrilling; in other respects the same.

13th.—Died at 5 o'clock a.m. No post-mortem examinatio addition to the observations already made, the following iculars require special notice. *First,* in both these patients disease proved fatal in about four weeks. *Secondly,* in ner did the pulse exceed the natural frequency, being about in Coghlan, and about 50 in Parker. This circumstance s strongly to distinguish the disease from hemorrhagic fever; worthy of remark, too, that there was no febrile disturbance he nervous system, no headache, raving, or even want of p. On the contrary, until the system suffered from excessive of blood, the functions of the nervous system were quite un- aired, and the patients looked and spoke in a manner quite rent from that of fever patients. They were, almost to the perfectly rational, and in the beginning of the disease their ngth was not remarkably impaired; it yielded, and that ually, not to fever, but loss of blood. I dwell on this, use some of my friends suggested the idea, that these men affected with hemorrhagic typhus. *Thirdly,* the eruption oth was slightly elevated, and evidently constituted an efflor- nce or rash, and disappeared in five or six days altogether, entirely differing from the spots of purpura. *Fourthly,* the ase, in the first instance, seemed almost exclusively confined he arterial and capillary systems of vessels, and did not ge the nervous, respiratory, or digestive systems at all in hlan, while in Parker neither of the two former systems were licated; but the stomach and more especially the liver ned affected, circumstances in all probability not essentially nected with the disease, but attributable to his drunken its. *Fifthly,* were I again called on to treat a similar case, uld in the beginning use depletion by the lancet to a much ter extent.

r. Watson, in the article Hemorrhage, in the *Cyclopædia of tical Medicine,* mentions, besides "congestion," which could ly have caused the extensive bleeding in the present case, conditions of facts concerned in the production of idiopathic orrhage: these are, first, an alteration in the vessels or tures through which the healthy exhalations are trans- ed; this alteration depending on morbid debility and ation. Secondly, an attenuated state of the vital fluid.

I do not think that either of these causes can account for sanguineous discharge in the case last detailed, and my reasons for this opinion are the following:—First, that the thrilling and bounding pulse, and the violent action of the heart, together with the total inefficacy of tonic and astringent treatment in the above case, denote an energetic condition of the circulating system not reconcilable with the supposition of a weakened state of the exhalent vessels. Secondly, that the natural coagulation of the abstracted blood is opposed to the idea of that fluid having existed in the circulation in a depraved or attenuated state. If we were to judge of this case by its unyielding opposition to remedies, stimulant and antiphlogistic treatment having been unsuccessful, we should be reduced to the necessity of supposing that it had for its cause a peculiar *hemorrhagic* action of the capillary vessels of the mucous membranes, probably co-existent with, if not dependent on, an increased action of the whole capillary system. But the question suggests itself, whether in these cases of idiopathic hemorrhage the capillary vessels may not be supposed to assume some morbid action, tending to the effusion of pure blood in place of natural secretion, and whether this may not exist without any alteration in the structure of the vessels, or in the physical condition of the blood within them. If such a state of the capillary system can exist, it might account for many forms of hemorrhage which are now supposed to depend upon some mechanical alteration in the solids or fluids; and would, I think, sufficiently explain the phenomena presented by the disease before us, which cannot be explained by the supposition of structural change.

There are but two diseases described by authors whose symptoms bear any marked resemblance to those of the disease in question; these are, purpura and scurvy; and it now becomes my task to show some very important distinctions between these somewhat similar affections.

In all these diseases one great feature is alike, namely, the occurrence of *general internal bleeding;* this is common to them all, but there are some striking peculiarities in the disease I have now described to you, which will doubtless be allowed to entitle it to a distinct and separate character: to these I beg leave to direct your attention. First, then, to engage in the inquiry whether our case was one of *purpura.* Dr. Goldie, in the article Purpura, in the *Cyclopædia of Practical Medicine* that disease in the following manner:—As characterized orescence on the skin of red, purple, or livid spots of izes, accompanied by hemorrhage from various parts, ›m mucous surfaces; he proves that the spots consist ns of blood under the cuticle, and says with regard to ;hey are therefore essentially different from every form : other cutaneous eruption, and are properly considered ıult of cutaneous hemorrhage."

then, it is evident, that in purpura the cutaneous is the most characteristic, and that it is the con- of small extravasations of blood. In the disease before ɹption only existed during five days out of twenty-nine; partial, and did not arise from effusion of blood, for it throughout the precise properties of an exanthema, 'ing on pressure, returning instantly, and fading . Again, the purple spots produced in purpura by ɪever appeared in the case before us. The eruptions of eases are, therefore, perfectly contrasted; the pulses : as widely from each other. Dr. Mackintosh describes › of purpura as varying much in different cases; in ng quick and weak; in others full and intermitting; ›ne is there the smallest approach to the permanently or to the dicrotous character of the pulse in the disease . The state of the *tongue*, although it seems to me far ıected than that of the *pulse* with the disease we are ng, was yet equally remarkable. The last distinctive ween these diseases, to which I shall direct your notice, ;t of no ecchymoses having been detected in the above ıigns which so often appear in the autopsy of purpura.

appear, then, that too many and too important s exist between the cases I have detailed and the f purpura to allow of their being classed together.

tend this examination, I will now consider whether more allied than purpura to the disease in question; he very threshold of this inquiry a mark of distinction 'ed, which afforded no assistance in the previous com- -I allude to the causes of scurvy. It must be confessed ;auses of purpura are often as obscure as were those of se under consideration, but not so with scurvy. There sease more plainly traceable than scurvy to manifest causes; and I can discover no account of scurvy having ever suddenly attacked a man in the prime of life and health, accustomed to wholesome food, and subject to no evident morbid influence. The disease of which I speak did, however, arise in this sudden and inexplicable manner; the mild symptoms of a febricula having been its only premonitory signs.

Now that I have referred to scurvy, allow me to digress for a few moments while I lay before you a series of coloured drawings, which exhibit the morbid appearances in the true scurvy, now a very rare disease, and which you will seldom have an opportunity of becoming acquainted with, except from books. The disease is the true sea scurvy, formerly the plague of all long voyages, but over which medical science has achieved one of its greatest triumphs, not less by the cure than by what is far better—the prevention of this disease, which is now so readily effected by the use of fresh provisions and other appropriate means, that it should now be never permitted to break out on board a ship during the longest voyage. The subjects from whom the drawings were made were part of the crew of an East India ship coming from Calcutta, but to which the parsimony of the owners had denied a proper supply of fresh provisions. There were no potatoes nor antiscorbutics on board; the consequence was that the crew had nearly all become affected with scurvy, and were unable to work the vessel, which was driven on shore near Balbriggan. The crew were landed, and those who were the most disabled were removed to the Meath Hospital, where, under the use of fresh vegetables and anodynes, they are all recovering. They are all young men of vigorous constitutions. These were the first cases of the disease I have seen, and I was not perfectly aware of the course taken by the disease till I had observed these patients. From the descriptions given by the men, and my own observations on them while in the hospital, I shall give you a short account of the symptoms:—An eruption on the skin resembling petechiæ, and in some parts large blotches and ecchymoses like those of purpura, first made their appearance; the subcutaneous areolar tissue was engaged in these, and effusion into it rapidly succeeded; there was extreme debility and prostration of strength; the gums became tumefied as the disease proceeded, and abrasions appeared about their edges, from which there were frequent discharges of blood. In ne cases there is merely tumefaction of the gums without asion; in a still more advanced period the tumefaction inases, and there is a morbid growth or true hypertrophy of the ns, in which the teeth are completely imbedded; this morbid wth becomes blue, and at last ulcerates and gives rise to norrhages. None of the present cases have proceeded so far this. The gums in all the patients were tumid and hyperphied, and portions of the gum appeared wherever there was interval between the teeth which were loosened. In several the cases the gums were ulcerated; in some there was effusion to the popliteal space, which was filled with a painful swelling. milar swellings appeared on the head and other parts in hers, resembling syphilis in appearance; in one the cicatrix a bubo that had healed three months previous broke out resh. In all, the rapid progress to a healthy state under the se of proper diet was remarkable, exemplifying the great nportance of constitutional means in local disease. You erceive, then, what a marked difference there is between sea curvy and the disease which I have been speaking of in this ecture, to which I shall now return.

As to the hardness and thrilling character of the pulse in hese cases, it was very remarkable; but it is difficult to deternine whether it depended on the action of the heart, or on some eculiar functional derangement of the arterial system, or on ome diseased condition of the capillary vessels reacting on the atter; but I am much inclined to think it connected with either r both of the latter conditions, rather than any particular ffection of the heart. In Parker I observed something like a licrotous systole, but it was very indistinctly marked, and in he other case it was absent. I am, therefore, disposed to elieve that the peculiar action of the pulse was wholly indeendent of that of the heart: we have many examples of this. attended some time ago, with Dr. Dwyer, a gentleman in arliament Street labouring under maculated fever. It was bout the tenth day of fever; the patient was extremely ill, nable to turn in bed, and scarcely able to swallow; labouring nder tympanitis and subsultus, and yet his pulse had the very emarkable character which I have just described; it was thrillng, dicrotous, and hard. After firm pressure with my finger, could feel the pulsation of the vessel below the compressed point; yet this was a man to whom we were obliged to give wine and stimulants, so great was his debility.

Some time ago I met with a gentleman whose pulse presented this hard, thrilling character in a very remarkable degree: he was a military man, equally distinguished for his energy and coolness; a person of calm temper and sound judgment; in fact, apparently anything but a nervous or irritable person, yet his pulse differed remarkably in its action from the heart. Both were slow; but while the action of the heart was calm and natural, that of the pulse betokened high excitement. I never felt such a pulse, even in cases of pleuritis, or pneumonia, or rheumatic fever; yet it was seldom above 60 in the minute. The first time I had the pleasure of his acquaintance he came to consult me for a slight cold; he looked well, his chest was apparently but little affected, and I thought I never saw a patient with less to complain of. Before I dismissed him I felt his pulse, more as a matter of course than from any curiosity as to the state of the circulation. On laying my finger on the artery I felt quite alarmed. I ordered him immediately to bed, and sent for the family apothecary, to whom I gave directions to bleed him largely. I visited him next day, and found everything going on well: sleep, appetite, digestion, respiration, all natural; but his pulse was just the same as before. It bounded under my finger with a degree of force and wiry hardness truly astonishing. I paused just as I was about to use the lancet again, and determined to wait some time longer and watch the progress of the case.

The gentleman continued to improve, and got perfectly well, but the pulse remained as before. As he was a military man, and liable to be brought into contact with strange physicians, I thought it necessary to give him a certificate, stating the character of his pulse; for if he happened to be attacked during his service with any species of illness, and a stranger to his constitution were called to prescribe for him, he would most certainly take out his lancet immediately, and bleed him to the amount of one or two pints.

I mention these cases to show that the state of the pulse is not an infallible guide, capable of directing our practice on all occasions, and that the action of the pulse depends upon something besides the heart.

always something in disease accompanied by loss .culated to awaken our sympathies. Loss of blood ›ctly to our animal instincts, and few can witness unning to the succour of the bleeding person. The ill pass by other cases with no other sympathy than ention, but his feelings are affected by hemorrhage hose of the bystanders, and his assistance is, there- with a promptitude seldom bestowed on other

blood, besides its immediate effect, is also likely to .nges which are long felt in the system; persons after ıorrhage are liable to suffer long after the accident, ı the functions go on as before, and the loss is ›t a certain languor generally remains, accompanied of the lips and face. I have seen several instances ıe persons looked blanched and white, like pieces of :ble. I recollect a lady who after extensive loss of ined for several years as pale as wax; indeed she ›ughly recovered her natural complexion, and looked on in the last stage of chlorosis. The same thing ılorosis, in which the blood appears to be manufac- y, and of a deteriorated quality. This state, however, ı the former, for it may be wholly removed, and the ›ored to her natural complexion; but any person who r a few months pale from loss of blood seldom or 'ers the hue of health.

at present in Kingstown a man who was bled nine hree days, each time largely, for an attack of acute , and though many years have since elapsed, he has lour and aspect of a person about to faint from loss of lady of my acquaintance underwent a similar excessive ›hlebotomy thirty years ago, and is still remarkable :treme pallor, a fact strongly confirmatory of the ıich Tacitus has so graphically drawn of the effects blood, on Seneca's widow, who, wishing to bleed to ; with her husband, was saved by the orders of Nero, ret invidiâ crudelitatis." But the tyrant's object was plished, and she remained for many years, adds memorial of her husband's fate, "*ore ac membris in* *em albentibus, ut ostentui esset.*"

I shall next call your attention shortly to the particulars of a singular case which Dr. Boxwell, of Abbeyleix, has furnished me with, of purpura hemorrhagica, in the course of which an effusion of blood took place into both eyes, thus completely destroying vision. The blood was extravasated, in the first instance, somewhere behind the iris in the right eye. Now, as the pupil had a blood-red appearance when the impairment of vision commenced, and at that time there was no discolouration or muddiness in the anterior chamber, we may conclude that the first hemorrhage was into the structure of the vitreous humour. Had blood been effused into the posterior chamber, in such quantity as to impart to the pupil a blood-red appearance, it must have tinged strongly the fluid in the anterior chamber. Vision became worse and worse in the right eye, and was extinguished in about five hours, at which time the aqueous humour was evidently mixed with blood. Next day the other eye became similarly affected, and the young lady continued totally blind until her death, which took place in about a week afterwards, under circumstances so extraordinary, that it may be useful briefly to recapitulate the leading features of her case, as communicated by Dr. Boxwell. The disease commenced with severe pain in the hip-joint, increased on the slightest motion. At first she appeared to be relieved by baths, calomel, and James' powder followed by purgatives; but as the pain returned with increased violence, it was found necessary to apply twelve leeches over the hip-joint. Dr. Boxwell returned in two days to see his patient, a young lady about thirteen years of age, and found that the bleeding from the leech-bites had continued in spite of all the efforts of her attendants, ever since he left her. She was pale, and exhibited the appearance of a person exhausted by bleeding. Her pulse, however, was not feeble; it was quick and bounding, just as it is in many cases after copious loss of blood.

From that period her complaint assumed the character of purpura, attended with the discharge of bloody urine. No other hemorrhage took place, except that already described, into the eyeballs. The bleeding from the leech-bites had completely removed the pain in the hip-joint, but she now began to complain of intense pain in the head, accompanied by throbbing, nausea, and total loss of appetite. The headache became every day more excruciating, and the discharge of blood from the ladder greater. The most judicious treatment was ineffectually mployed; no medicine, no local application diminished the gony she suffered from pain in the head; and she died on the ourteenth day from the commencement of her illness, exhausted by pain and loss of blood, having retained her intellect to the last, and without the least sign of paralysis, coma, convulsions, or any other symptom denoting the effusion of blood within the ranium. The duration of the disease, from its commencement to its fatal termination, was only fourteen days.

I shall now conclude the observations I intend making on diseases of the skin, with some remarks on the hair and its affections.

Physiologists are agreed that the hair consists of matter somewhat analogous to horn or nail, secreted by a vascular sac imbedded in the skin, and sometimes reaching as far as the subcutaneous tissue. There is reason to believe that this sac is abundantly supplied with nervous matter, and embraces within it the bulb-like root of the hair, which is now generally thought to be of a homogeneous texture, and not tubular or hollow in the centre. The colouring matter of the hair is said to be diffused through its substance; and most authors are of opinion that the hair, once formed, is then placed beyond the reach of any change connected with the organism. The phenomena of plica Polonica seem difficult to reconcile with this hypothesis, and my observation that hair, generally speaking, grows grey first at the top—the want of colour proceeding from the point towards the root—seems to establish the contrary supposition; and proves that the hair, during its growth at least, is an organized body endued with vitality, or otherwise it could not happen that colouring matter once deposited through its texture could disappear. And he probability of this opinion is strengthened by the rapidity ith which it disappears, for even a long hair, when the greyness t its extremity has commenced, becomes entirely grey in the ourse of a few days, the absorption of colour proceeding rapidly o its root. Examples, too, have occurred of an evident sensiility existing in hair otherwise healthy.

Some physiologists have attributed the colouring matter of the air to the sebaceous follicles, which, they say, secrete an oil, by he combination of which with certain principles contained in the hair the colour is developed; but, according to this opinion, the hair once dyed would not lose its colour in the manner I have described above. For practical purposes, then, we may consider the hair to resemble a plant imbedded in the surface of the body, and consequently its healthy or its diseased functions must be connected not only with changes occurring in the hair and its bulb, but with those which take place more immediately in contact with the latter. Thus, the hair may cease to grow, and baldness ensue, as in old age, from decay and absorption of the bulb itself; or the same result may in youth be produced by causes which injure the vitality of the bulb, or change the structure of the skin in which it is implanted.

I shall now relate some cases in which grey hair regained its natural colour. A field officer in a distinguished regiment had served for many years in tropical climates; had undergone the fatigues of the Burmese and other subsequent campaigns in the East Indies, during which he contracted dysentery and fever, and various maladies peculiar to hot countries; and finally, after many years' service, was obliged to return to Ireland for the purpose of recovering his health. When he consulted me he was worn and emaciated, and complained much of dyspeptic and nervous symptoms, with a constant tendency to bowel complaint. He was then forty-eight years of age, and his hair had, during a few years preceding, become quite white; while his forehead, parts of his cheeks and back of his neck and shoulders, presented many large maculæ of a brown colour, nearly as deep as the areola round the nipple of a pregnant woman. In the course of a few years he visited me again, having during the interval remained with the depôt of his regiment in England, and gradually regained his health under the influence of regimen and his native air. On his second visit I scarcely recognized my former patient. He had become robust and healthy-looking, and the maculæ had altogether disappeared, while his hair had regained its original brown colour: not a single grey hair remained. The hair is now soft and silky, and has continued of its natural colour during the last two years; but it is remarkable that the whiskers have remained white.

In the year 1837 I was called by Dr. Beauchamp to see a gentleman, aged 67, labouring under the then prevalent influenza. He was a strong, hirsute man, and his chest was ered with long white hair, which had been black in his youth. blistered him on the chest, and when he recovered from the ease the hair on the part that had been blistered grew again, was now quite black, and has continued so since. I need rcely add that he is very proud of this unexpected symptom returning youth, and readily exhibits to the curious this rtion of his chest.

In the year 1815 the late Mr. Daly consulted me in the case a shopkeeper, aged about 35, who had a slight attack of oplexy, followed by incomplete hemiplegia. As the disease hibited a tendency to relapse, we judged it necessary to establish permanent drain from the vertex, to which a blister the size of crown-piece was applied, and the surface was made to discharge r several months by means of Albespeyrre's plaster. When his covery was complete, the blistered part was allowed to heal. I ould have remarked that this gentleman was perfectly bald on s forehead, vertex, and temples, and the skin of the scalp was ooth and shining. A few weeks after the blister was healed, growth of hair took place in the form of a ring, encircling the istered surface at the distance of two lines.

Miss M., affected for many years with tinea capitis and psor-hthalmia. The hair on the vertex had become quite grey, d there were several bald spots in the neighbourhood. She s recommended by Mr. Wilde to use the common gas-water as lotion to her head. After a long-continued use of the remedy, e hair grew on the bald spots, and both it and that on all the fected parts recovered the natural colour. This was the more markable, inasmuch as the parts of the head to which the medy was not applied are still covered with grey hair. Mr. ilde observed a similar restoration of the colour of the hair m the use of Donovan's brown citrine ointment.

Mr. B., aged about 35, when first seen six years ago, had hair a greyish colour, from the intermixture of white and black irs, the latter in comparatively very small number. He com-ined that his hair had been getting grey and falling out for ne time previous, which he ascribed to bad health consequent impaired digestion. Twelve months afterwards the grey hairs l entirely disappeared, his health and strength having in the antime much improved, chiefly by travelling.

Mrs. ——, aged 35, had a very severe attack of fever, after recovery from which her hair turned quite grey, and began to fall out. The head was then shaved, and the shaving was repeated several times, after which there was an abundant growth of hair of the original auburn colour.

Dr. Stokes has communicated to me the following fact relative to the hair, and which forms a singular exception to what is usually observed in phthisis. A young lady, of fair complexion and dark hair, became consumptive, and her luxuriant hair rapidly fell out and deteriorated, being replaced by a thin, woolly, coarse crop. The tubercular disease proceeded slowly, lasting about fourteen months. About six weeks before her death a new crop of hair appeared, if possible more beautiful than her original hair, and grew with such unexampled rapidity that at the period of her death she had a splendid head of hair. Physiologically it is deserving of remark that, though this young lady had considerably emaciated in her body and limbs, her face and features preserved all the rotundity and plumpness of beauty; the scalp, therefore, was in all probability by no means deficient in nourishment. The unexpected appearance of hair excited vain hopes in the breast of the poor patient and her friends, who could not be persuaded that this new product of life was but the forerunner of death.

A friend of mine, a practitioner of great experience, now residing in Athy, came to Dublin to consult me very recently. He is seventy years old, and labours under various nervous symptoms, which commenced about two years ago with *hemicrania* of the right side of the head, attended with a singular and exquisitely painful affection of the right half of the scalp, which was as sore as possible to the touch, and each hair in it felt, as my friend expressed it, like a minute poniard implanted in the skin. Nothing could exceed his agony for four days and nights, during which he never closed an eye: at last a minute pustule, that soon desiccated, appeared round each hair, and in a few days his scalp got well. During the height of the disease the engaged half of the scalp was red, but not erysipelatous. As far as I can understand this remarkable and rare case, it must be considered as an acute inflammation of the bulbs of the hair: strange enough, it was not followed by a falling out of the hair.

Whatever opinion may be formed as to the relative value of the various theories formed to account for the growth and colour ɩir, it seems clear that some practical deductions follow foregoing facts. In the first place, it is evident that ;h and colour of the hair may be most beneficially influ- the application of stimulants to the skin; and it is n probable that numerous cases of baldness and want of ɔuld yield to such an application of stimulants, if we w how to proportion the quantity of stimulants to the s of each individual case. There is here a difficulty, insuperable, but which still we should try to surmount. t is that many popular remedies which enjoy a great n contain a combination of oily and stimulating sub- such as castor oil, goose grease, and tincture of can- This composition, with the addition of a little elling essential oil, often exerts, in my opinion, a beneficial effect when rubbed into the roots of the hair of a piece of flannel. The quantity of the tincture of les should not exceed ʒi. to the ounce, and our object e by each application to produce a slight evanescent vhile the skin remains anointed with oil. When it is to be essential to produce a rapid desquamation of the s, short of vesication, I know no better means than over the surface with the tincture of iodine every third day. A good pomade for the hair consists of equal ɔastor oil and lard, with the addition of attar of roses, ;ht drops to four ounces.

ny it may appear trifling and beneath the dignity of a physician to dwell so much on this topic; but in truth have always attached much importance to this ornament uman body, and grey hairs and baldness are to many appalling as real disease, or even death. This feeling ɔnfined to the moderns, for we find the poets and the of antiquity abound in passages to the same effect. sician who has witnessed the strange degradation of ce which follows the shaving of the female head in fever, nowledge that the grief of the ancient widow who laid es on the tomb of her deceased husband,* had at least r show of poignancy than is exhibited by our modern

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he Helena of Euripides, the heroine exclaims when about to simulate the rb:—

ἐγὼ δ' ἐς οἴχους βᾶσα βοστρύχους τεμῶ, &c.
"I will go in, cut off these crisped locks," &c.

ladies, who on these occasions partially conceal, but never dest this cherished ornament. And they are probably right, for operation of natural causes renders the growth of hair slo than the decrease of sorrow. I was not aware of the great deg of beauty which the hair imparts, until Mr. Clibborn showed in the Royal Irish Academy, a skull of a Peruvian female which the bones of the face and forehead were as usual expo but the desiccated scalp still bore a luxuriant crop of flow ringlets, which imparted no small degree of beauty even to death's head.* I here may mention, that I once attende lady upwards of eighty years of age, who exhibited all the u appearances of withered senility, but who had a magnific head of coal-black hair. Contrary to what might be expec she bitterly deplored the circumstance, for this emblem of yo was but ill assorted with every other external sign of old "Two years ago," said my patient, "my maid, in combing discovered a grey hair. I was overjoyed, and hoped that oth would speedily follow; but none have appeared since." was the only person who ever asked me for a *receipt* to turn hair grey.

We are aware that the least highly organized tissues capable of being reproduced after being destroyed; now, m facts have come under my notice which seem to authorize conclusion, that when the original stock of bulbs has b destroyed in the scalp, a new stock is frequently manufactu by the powers of nature, and thus an entirely new crop of h arises. It is well known that cases have occurred where sup numerary teeth have been produced; and, in the celebra Countess of Desmond, it was asserted that when the adult of teeth failed from old age, a rejuvenescence took place, an third set of teeth appeared. I was always inclined to doubt truth of this assertion, until the late Dr. Curran related to the following particulars respecting his great-grandmother, M Waterworth. She had always been a remarkably healt woman, was extremely active in her habits, and died apparen of mere senility, aged ninety-five. When about eighty, sight, which for fifteen years previously had been so weak o prevent her reading, became so completely restored that at the time of her death she could, without spectacles, thread the finest needle, and read, without fatigue or difficulty, the very smallest print. She, about the same time, got a completely new set of teeth. The exact number of teeth that grew at this unusual period I have not been able to ascertain; but of the fact, as stated above, there can be no doubt. This rejuvenescence was not consequent on any change of place or habits, but it was accompanied by a very considerable increase of strength, which continued to the last. Dr. Curran had a very curious copy of Mr. Easton's valuable work on longevity, in which the author has added in manuscript notes many interesting particulars respecting Mary How, of Mapleton, Derbyshire, who at the age of 110 got several new teeth, whilst her hair resumed its former colour; Peter Bryan, of Tynan, County Tyrone, who cut several teeth at the age of 117; Lady Angelique Domengieux de Sempe, of Nouiliac, in France, who got teeth at 90, and lived thirteen years afterwards; Margaret Melville, of Kelle, Fifeshire, who lived to 117, and got teeth at 100; John Minnikin, of Maryport, Cumberland, whose hair grew so abundantly in his old age that twenty wigs were made of it between his 80th and 112th years; and many similar instances, of many of which Mr. Easton was himself cognizant. These cases are, perhaps, not more extraordinary than that the costal cartilages should not have been ossified in the case of Old Parr, who lived to 152, a fact for which we have the authority of a committee of the Royal Society (among whom was the great Harvey), appointed to make the post-mortem examination. As an example of a somewhat similar exception to general rules, Dr. Curran mentioned to me the case of his friend Dr. Harrison, now a practising physician in the Isle of Man, who grew one inch in stature between his thirtieth and thirty-second year.

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* The mummy here referred to is now in the Museum of the Royal College Surgeons. See Mr. Wilde's description of it in the *Parthenon*, for the 15th June, 1839, where the head and hair are figured.

In Tschudi's *Travels in Peru*, it is stated that the Indians of Peru are remarkable for their longevity; instances are not rare of Indians living to be 120 or 130 years old, and retaining full possession of their bodily and mental powers. The Indians retain their teeth and hair in extreme old age, and it is remarkable that their hair *never becomes white, and very seldom even grey;* those individuals whose advanced ages (above 100 years) have been mentioned, had all fine black hair.

VENEREAL DISEASES.

LECTURE LXII.

GONORRHŒA.—GONORRHŒAL RHEUMATISM.—GONORRHŒAL OPHTHALMIA.

I SHALL now, gentlemen, proceed to lay before you some observations on syphilis. Bell, Hunter, Matthias, Pearson, Carmichael, Rose, Hennen, Colles, Wallace, and Ricord have so diligently investigated the history, symptoms, and special pathology of venereal affections, that I consider it unnecessary to touch upon these matters at present, and consequently I mean to confine my remarks to a few controverted subjects connected with the general pathology and therapeutics of syphilitic diseases.

I hold in my hand a report by Dr. Roe, containing a return of the venereal patients treated in the 38th Regimental Hospital, from the 11th of June, 1836, to the 15th of November, 1837; giving in separate columns the names, ages, forms of disease, periods of admission and discharge, duration of the treatment, and remarks. The compiler, Dr. Roe, was a fellow-student of mine, educated in Dublin, and always noted for his intelligence, accomplishments, and steadfast zeal for his profession. Under the late Mr. Colles, and the surgeons of the Lock Hospital, he had ample opportunities of witnessing the effects of the mercurial treatment of syphilis. He has treated the disease in the East Indies, the Ionian Isles, and at home, and from his habits of observation, sagacity, and attention, any statement coming from him must be very valuable. During the period from the 11th of June, 1836, to the 15th of November, 1837, the number of patients treated in the hospital of the 38th Regiment was 231. Of these, 80 were affected with gonorrhœa, 87 with chancre, 36 with bubo, 23 with hernia humoralis, and 4 with ncre and bubo. 90 were under 20 years of age; 95 from to 25; 23 from 25 to 30; and 17 from 30 to 40, and up- ds.

everal caught the infection more than once during the space time mentioned. Thus, Henry Carter was admitted for orrhœa on the 11th of June, 1836; again for gonorrhœa on 25th of February, 1837; and again for the same on the of May, 1837. John Adams, twice for gonorrhœa; Arthur sbitt, twice for chancre; John Williams, twice for chancre; lliam Bexham, twice for chancre; John Jess, once for norrhœa, and a second time for bubo. With respect to the ration of these cases, treated wholly without mercury, Dr. Roe es the following summary:—The cases of gonorrhœa were an average 15 3-7th days under treatment; chancre, 21 11th days; bubo, 27¾; swelled testicle, or hernia humoralis, , 3-5th; severe cases of chancre, with bubo, 18½ days.

The following was the general plan of treatment pursued by . Roe; and first with regard to gonorrhœa. The men on mission, having been washed with warm water and soap, were lered to take an aperient mixture, composed of sulphate of gnesia and tartar emetic, every third hour, until the bowels re freely opened. A small piece of lint was applied to the fice of the urethra, and a short roller soaked in cold water s passed round the penis, to keep the parts cool and clean. If re was much ardor urinæ, the patient was ordered to foment part, and syringe with warm water every second hour. As n as the ardor urinæ abated, an injection of sulphate of zinc wo grains to an ounce of water—was used four or five times a ; as the smarting in passing water abated, the proportion of hate of zinc was increased to five grains to the ounce. He commenced bathing the parts with cold water, and prescribed am of copaiba, turpentine, or cubebs. The patients were riably confined to bed while under treatment, used only on-meat or milk diet, and barley water for drink. Every d or fourth morning a dose of Epsom salts, with or without ar emetic, was taken to keep the bowels free. In a few tinate cases, injections of sulphate of copper or nitrate of er were employed, with the occasional use of the bougie, or a all blister over the track of the urethra.

From this simple, but excellent and efficacious plan of treating gonorrhœa, we come now to the treatment of chancre. This is a point deserving of your attention, and peculiarly important with reference to the subject at present under consideration. The patients, on admission, were purged with Epsom salts and tartar emetic, and were ordered to apply a bit of lint, wet with a solution of sulphate of copper, to the chancres, renewing the application every second hour, and using the moistened roller to keep the parts cool and retain the dressings. Milk diet was prescribed as before, and a dose of salts, or salts and tartar emetic, taken every second morning. The parts were frequently bathed with cold water, particularly if there was any pain in the groins, and the chancres were occasionally touched with nitrate of silver, or sprinkled with red precipitate to expedite the cure. Calomel was rarely given; and when administered, not for the purpose of affecting the mouth, but merely as an alterative, and in combination with tartar emetic. The men were all confined to bed, the most perfect cleanliness insisted on, and the bowels kept in a soluble state. Buboes were treated in a similar way, but with a more rigid observance of the antiphlogistic regimen.

Buboes were often seen without any ulcers on the penis, or they have appeared after the ulcers have healed. They were constantly bathed with cold lotion; and by this means, aided by the solution of tartar emetic and salts, they were frequently dispersed. If, in spite of these measures, they became enlarged, red, and tender, a warm poultice, three times a day, and frequent fomentations were employed. If there was still any chance of resolution, small doses of calomel and tartar emetic were administered, and the poulticing continued, care being also taken to keep up a loose state of the bowels by saline purgatives. In general, these means were followed by the desired effects. If, notwithstanding, the buboes increased in size, became softer, and exhibited proofs of fluctuation, Dr. Roe opened them by applying the kali purum to the diseased surface. He then continued the fomentations and poultices, dressed the ulcer with red precipitate, and when it began to assume a healthy appearance, applied a compress and roller to keep the edges of the ulcer together, and repress exuberant granulations. At the same time the patient took decoction of bark with sulphuric acid, or sarsaparilla with nitric acid; these, with a more generous diet, erate use of porter, generally succeeded in producing ıd permanent cure.

all Dr. Roe's patients there was only one case of ɜyphilis. This man, who laboured under buboes at ' his admission, was in bad health; the buboes were ɔhronic, and difficult of cure. He was treated during and returned some time after being discharged, com- cough and sore throat, with a papular eruption over , back, and thighs. He was treated with alterative ılomel, combined with tartar emetic and opium, and arm bath three times a week. His bowels were kept ːnerous diet, with porter, was allowed, and he took ion of sarsaparilla with nitric acid. He recovered , and is now stronger and in better health than he 'or many years. A solution of alum as a gargle, and volatile liniment, with flannel, externally, was all that necessary for the cure of his sore throat. He was ·nth under treatment.

ıs the plan of treatment followed by Dr. Roe, and ›ved eminently successful is shown by the result, for patients, of whom 87 had chancre and 36 bubo, there ne case of secondary syphilis. Of these facts I have .f a witness, and they are certainly of great importance. ıink that more gratifying results could have attended gulated mercurial treatment. I may observe, however, rs enjoy many advantages which civilians of the lower n a great measure, deprived of. They are not left to liscretion as to the time they should apply for advice, ıode in which they should conduct themselves during of treatment. Soldiers are generally inspected by ıl officer once a week; the glans, prepuce, orifice of ı, and groins are carefully examined, so that any trace cannot escape detection. In this way the disease is t its very commencement, and checked at once; a ce which, for reasons hereafter to be explained, has ant influence on the proportion of the cases of ɜyphilis.

.uring the process of cure, the men are not allowed to t, take exercise, indulge in the use of intoxicating ɜtimulant diet, or expose themselves to the vicissitudes of the season. It may be also observed, that soldiers, from the care employed in the selection of the recruits, from their mode of life, diet, exercise, and regular hours, are some of the healthiest members of the community; and therefore enjoy, in a very remarkable degree, the advantage of resisting infectious diseases, or getting rid of them sooner than persons of feeble constitution.

There are some points in Dr. Roe's treatment to which I shall now advert. In gonorrhœa he begins, internally, with cooling antiphlogistic medicines, and afterwards passes to the use of internal stimulants. He also applies local antiphlogistic means in the commencement, directing the patient at first to syringe with tepid water, which is exchanged for a mild astringent injection as soon as the ardor urinæ abates; and he afterwards employs stronger and more astringent injections. When neglect or an injudicious treatment has allowed gonorrhœa to attain the second stage—that of inflammation—it will be always right to apply the antiphlogistic method generally and locally; but this does not preclude the use of injections; they must be skilfully administered, for fear of injuring the inflamed urethra, and at first should merely consist of one drachm of mucilage dissolved in seven of water. After using this two or three times, one grain of sulphate of zinc may be added. On the morrow and day after, the same may be continued, and then it may be rendered more active by increasing the quantity of sulphate, and adding other matters, of which more hereafter.

In order to prevent you from misunderstanding my meaning, it is necessary to explain that gonorrhœa may be considered as exhibiting three different stages. In the first, immediately succeeding the period of incubation—during which the infection has as yet produced no perceptible symptoms, a very slight oozing of whitish mucus takes place from the urethra and a little tingling is felt in that passage, the mucous membrane then exhibiting an incipient redness. No pain is felt in passing water. This stage seldom lasts more than two days: but occasionally it does. When gonorrhœa is to be violent, it is of short duration; when mild, of longer. It passes gradually into the second or inflammatory stage, with its well-known *profluvium*, ardor urinæ, and other symptoms; and this again, in due time, is succeeded by the third stage, or that of decline. The first and last s are peculiarly suited for the employment of astringent tions.

do not know any practical point on which greater diversity inion exists than the administration of injections in gonor- . In Dublin, students are generally taught that their use nproper and dangerous. The following are the chief objec- s to which they are said to be liable:—1st, They do not inish the urethral inflammation though they dry up the harge, and consequently they lay the foundation for stricture, nore immediately occasion the inflammation to descend along urethra, until it extends to the membranous portion, the tate, or even the bladder. 2ndly, Their use renders swelled icle and sympathetic bubo more frequent. 3rdly, It is argued the use of any measures, except such as are purely anti- ogistic, must be improper in a disease accompanied by so y indubitable signs of inflammation.

et us closely examine this last objection, and we shall find it ossess more apparent than real weight; for analogy proves t the principle on which it depends is by no means universally licable, particularly in cases of specific inflammation. When geons placed their sole reliance on antiphlogistic measures, l or general, in the treatment of purulent ophthalmia, the lts were truly disastrous; and however exhausted the patient ame from excessive bleeding by the lancet and leeches, aided large and frequently-repeated doses of tartar emetic internally, local inflammation proceeded in its rapid and destructive rse, scarcely influenced, never effectually checked, by the tment adopted. I have seen a man treated (in the Meath pital, by myself, and the late able ophthalmic surgeon, Mr. son) with bleeding, general and local, employed, I might to excess, and aided by rapid and profuse mercurial saliva- : I have seen, in the patient referred to, both eyes destroyed purulent ophthalmia in a few days. Not long ago, I was d during the night to visit a young gentleman in a hotel: ad gonorrhœa, and went to bed without any complaint of the , but was soon awakened by pain in the left eye. It was lently purulent ophthalmia, and was cured in the course of a hours by relays of leeches, and a strong sulphate of zinc yrium, carefully applied.

fter thousands had lost their vision from the effects of this disease, it was at length discovered that some who adopted a totally different mode of practice, and who treated the purulent ophthalmia in its very commencement with strong astringent and corrosive applications, were eminently successful. This led many army surgeons, more especially Mr. Guthrie, to investigate the subject with care. You are aware of the important practical results at which he arrived, and of the great improvement which has consequently taken place in ophthalmic surgery, leading to the application of solid nitrate of silver, or its concentrated solution, of sulphate of copper, &c., &c., to the mucous membrane of the eye in the first stages of purulent ophthalmia—a mode of treatment which our predecessors would not have hesitated to pronounce most hazardous and destructive.

That astringent and stimulant collyria are applicable in the incipient stages of some other species of ophthalmia, as well as the purulent, is now familiarly known to surgeons. The following example of its utility in the latter occurs in a work lately published on the Oases of the Libyan Desert, by Mr. Hoskins. It is necessary to remark, that the ophthalmia described by Mr. Hoskins, and so common both among the natives and foreigners in Egypt, is essentially a purulent ophthalmia, which, however, attacks with very different degrees of intensity, being in some mild and chronic, in others most acute, and suddenly destructive of vision.

"Nov. 5th, 1832.—I was confined to my tent the whole of this day by a painful attack of ophthalmia; and although in the morning it was very severe, yet by double doses of the contents of an inestimable bottle, I have nearly subdued it. As some of my readers may wish to know what this wonderful vial contains —what this infallible remedy for such a baneful complaint can be—I will tell the history of it, though I cannot fully gratify the desire of the curious. The purser of the French frigate, the 'Luxor,' which was built for the purpose of removing one of the obelisks from Thebes, was the fabricator of this extraordinary water. He informed me, when in Egypt, that his father had been attached to Napoleon's expedition to that country, and had then discovered this miraculous cure. From fear of its being analysed, he had never allowed any person to possess more than a very small quantity; but he cured without fee all who came to him, Christian and Mussulman, French and English,

and Arab. When this liquor was applied in time, it was
always to stop the most virulent attacks of the disease, and
lly relieved in a very few days even those who had been
eral months martyrs to the complaint. A Turk, who had
d for years, was completely cured in a fortnight; and in
de to his benefactor gave him a horse richly caparisoned.
he Frenchman's fame was spread throughout the country,
any came to him as far as from Keneh and Esneh. Even
rgeon of the 'Luxor' was so sensible of the value of the
y, and of its producing no subsequent bad effects, that he
ll the officers and men of the vessel suffering from that
aint to the purser, or to the *hakim* (doctor), as the natives
him. The application was easy to the hakim but most
l to the patient. He let fall a single drop of the water on
all of each eye, which immediately spread, and from its
nt nature caused, if much irritation existed, the most in-
ssible torture. In twenty minutes, or half an hour, this
subsided, and a little clammy matter was seen to ooze from
e. The remedy, although violent, did not weaken the eye
slightest degree, nor in any manner injure the sight.
nowing that I proposed to go into Ethiopia, the hakim had
indness to sell me, for about its weight in gold, a small
of this water; but under the express condition that I
neither directly nor indirectly allow it to be analysed. He
hat it was his intention to return again to Egypt, and that
pected to be able to make his fortune; but whether he does
, I feel most grateful to him for having saved me from so
torture, as I have been often obliged to have recourse to
ater, and have kept my promise in not allowing it to be
sed. As this person has now left the country, and no
r supply is to be obtained, I prize the water most highly,
annot afford to use it for the relief of mere strangers. The
ly which we generally find to succeed with the natives,
applied to by them, is sulphate of zinc in strong doses—
rains being dissolved in an ounce of water, and a drop of
being put in each eye, two or three times a day. This is
means so certain a remedy as the hakim's water, but in
cases out of ten I have found it to succeed. When, how-
the inflammation and swelling are so great that the eyes
osed, *cupping* is the only effectual remedy.

"Mr. Ponsonby, who travelled with me in Lower Nubia, was attacked with this description of ophthalmia. He sent without delay for the hakim, *alias* barber, of the village. It was fortunate that the eyes of Mr. Ponsonby were quite closed, for had he seen the hakim, he would scarcely have reposed sufficient confidence in his skill to submit to the operation. The man was actually in rags, and of the most unprepossessing appearance, without a single ray of intelligence in his countenance. His cups were made of the horns of a cow, and his instrument was an old razor, not so decent-looking nor so sharp as a tolerably good stick knife. I offered him a lancet, but he said that he did not know how to use it. Thinking that it would be less painful for Mr. P. to be scarified with a sharp than a blunt razor, I gave the man one of my own; but being unaccustomed to so fine an instrument, and not aware of the much less force it required than his own blunt knife, he cut too deep; I therefore thought it best to allow him to finish the operation in his own way. I must confess, indeed, that he did it very expertly, and I may add successfully, as he effected a very sudden and almost miraculous cure of Mr. P.'s ophthalmia. At Thebes I had two severe attacks of this disease, which incapacitated me from either reading, writing, or drawing. Thanks to the hakim's water, these attacks were fortunately short; but they were painful while they lasted, and most irksome to support.

"To be debarred from all mental enjoyment and bodily exercise—to be in the world, and yet see nothing; and to be without the general resources of the blind, particularly society, this was indeed tiresome. A Turk might probably have amused himself with his beads, but even a Mohamedan's philosophy would have forsaken him in such a situation, especially as the regimen necessary for this complaint requires the sacrifice of the all-consoling pipe. The Arabs and Turks having frequently asked me for medicine to relieve them from attacks of ophthalmia, the water that I applied to their eyes invariably caused them extreme pain, which, however, they bore with great courage and resignation, having implicit faith in the skill of an European. When, however, I desired them to give up their pipes (smoking being extremely injurious) 'Inshallah!' (please God!) they replied; but never had the resolution to do so. An opium-eater may refrain from his weed, a drunkard may resign his glass, but n found the absurdity of asking an Oriental to abandon his oque. Like ice to the Sicilians, macaroni to the Neapolitans, grog to the British sailor, they consider it as their staff of , and conceive it impossible to get through the day without

Vith respect to the objection that the treatment of gonorrhœa injections lays the foundation for strictures, I beg most linctly to deny the truth of the assertion; whatever diminishes intensity and shortens the duration of the urethral in-nmation must tend to diminish, and not to increase, the ility to strictures. Compare the violence and duration of a orrhœa, skilfully treated from its very beginning by injections, h a case where no injections are employed—the physician's iance being exclusively placed on perfect rest, confinement, ting, and cooling medicines; compare two such patients— erve how the one is perfectly cured of his disease in a few s, without confinement, and without any deviation from his al diet and habits (I speak now of two cases coming under tment in a day or two after the appearance of the first ptoms); and then watch the other through sufferings pro-cted week after week, until his constitution is debilitated by finement and low diet; how often do we find the discharge n the urethra increasing daily, in spite of the general and iphlogistic remedies employed, until it is profuse in the reme, and accompanied by a great ardor urinæ, painful ctions, irritation of the bladder, and chordee.

ow I will fearlessly assert that a medical man who gets the e of a *recent gonorrhœa in a healthy constitution*, is grievously lame if he permits this series of bad symptoms to supervene. not deny that these symptoms will at length give way to phlogistic treatment, leeches along the perineum, stupes, iction of the skin, covering the urethra with mercurial oint-t and belladonna, &c., &c. These remedies will in the end rid of the disease, but then at what a loss of time and ngth! I again repeat the assertion, and I do it emphatically, a gonorrhœa treated by injections *from the beginning* can erally, in persons of sound constitution, be cured in a few s. When a gonorrhœa has been allowed to continue several ks, it often so alters the vitality, and probably the structure he affected tissues, that a cure is uncertain, and frequently the treatment becomes both perplexing and tedious: when a gleet supervenes, then remedies, even the most judiciously selected, frequently fail altogether: these facts prove the necessity of curing the disease in every instance as soon as possible.

But, gentlemen, we must here enter into details, and, first, as to the manner of injecting the urethra. Many believe that the inflammation produced by the specific poison of gonorrhœa is seated chiefly, if not exclusively, in the portion of the urethra near the orifice; and hence they are only anxious to introduce the injected fluid a short distance into that canal. Nothing can be more unfounded than this opinion, and nothing more injurious than the practice to which it gives rise. The inflammation which gonorrhœa produces in the urethra is by no means confined to the third of the canal near its orifice, but even in recent cases it extends much farther; and it cannot therefore be efficiently treated by injections, which do not come into contact with the whole extent of inflamed surface. Unless you yourselves teach your patients how to inject, not one in ten of them will do it properly. Of this an extensive experience has convinced me. Over and over again have I been told that there was no use in trying injections in a particular case, as they had been already tried in vain; and on accurately inquiring into the patient's mode of injecting, the result has been the discovery that he was quite ignorant of the proper method.

The pewter or glass syringe used must be in proper order, so as to work easily with the pressure of one finger; otherwise, when the end is in the urethra, and the patient tries to inject the fluid contained in the syringe, the point is very apt to be hitched against the urethra, in consequence of the force thus suddenly applied. The point of the syringe must be carefully introduced at least half an inch within the lips of the urethra, and the forefinger and thumb of the left hand must then be so applied as to press the lips of the urethra gently on the syringe, so as effectually to prevent the reflux and consequent escape through the orifice of the injected fluid. When the fluid is thrown in, the patient feels it in the urethra, which it distends gently as far down as the membranous portion, if a sufficient quantity is injected. Some persons have an idle fear about the ill consequences which would arise were any of the injection to arrive the bladder. An ordinary syringe does not contain more than lrachm and a half, which is about the quantity required for one jection. When the fluid has been injected, the point of the ringe is to be withdrawn, and the lips of the urethra kept sed with the finger and thumb, for at least two minutes, when, e pressure being removed, the injected fluid will be thrown out m the urethra with considerable force, in consequence of the asticity of that canal. These directions are by no means necessary; indeed, I never treat a patient without seeing that knows how to inject, for I find that many say they know the ethod who are quite ignorant of it, and who consequently do emselves more harm than good by making the attempt.

It is not my object to enter at present into the especial erapeutics of gonorrhœa, and consequently it would be foreign my plan to speak of the various substances which may be ed in injections; for an account of these I must refer to thors who have written at large on these subjects. As a neral rule, you ought to commence with weak solutions of the stringents you prefer, which solutions may be used five or six mes a day, and may be daily increased in strength. *An inction should seldom be used so strong as to cause at the time nything like severe pain of the urethra.* In this respect we ust not closely imitate the example of *eye-waters*, such as at used by the Egyptian *hakim*. I have, indeed, often known ery strong injections used at the first trial, and which, though ey produced great pain for many minutes after their introuction, yet were very effectual in rapidly curing the disease, nd that without any bad consequences. (This is more especially he case with nitrate of silver, which, although a powerful emedy, I have found unmanageable, and therefore not to be ecommended.) Still, however, by far the safer and more prudent ractice is to commence with astringent injections, so weak that, hen used, they may produce merely a sense of titillation, or of ery inconsiderable smarting.

It is often difficult at first to hit off, if I may use the exression, the precise strength required; and therefore I always ive my patients particular instructions, and desire them, if the njection is at all too irritating, to dilute it with water to the esired degree of strength. The sensibility of the urethra iminishes very rapidly when an injection of proper strength is applied to the inflamed surface, so that the solution may be daily rendered more astringent. I have told you that astringent injections are suited to every case of gonorrhœa at the commencement of the disease, and that, when properly used during the first, second, or third day, they almost always cut it short. It is not so when the disease has attained its acme, and the inflammation is at its height, accompanied by profuse discharge, chordee, &c., &c. Even then, however, injections properly managed will tend to assist the local antiphlogistic measures; but in such cases we must always commence by using mere mucilaginous warm water, and must add the astringents at first very sparingly, and increase their proportions very cautiously. I omitted to observe, *that always, before using an injection, the patient ought to clear the urethra by voiding a little urine.* Such directions, gentlemen, may appear to many prolix and unnecessarily minute; but not knowing any author who has condescended to give accurate accounts respecting these matters, I have thought it my duty to lay them before you, being convinced of their utility.

It is right also to put you on your guard about the mischief which may ensue if you attempt to prescribe astringent injections during the secondary or inflammatory stage of gonorrhœa, without previously having ordered such general and local antiphlogistic treatment as is required to diminish the existing inflammation; nor will even this be sufficient to ensure success, unless you take care that your patient remains quietly at home for a few days, and observes a spare vegetable diet. A person who will not follow your directions in these matters cannot use astringent injections during this stage of the disease with benefit or even impunity. In the first stage, and in the third, it is not absolutely necessary to enjoin rest and abstinence; it is, indeed, better and more prudent that the patient should remain in his room, and should observe low diet for a day or two; but in some cases this is impracticable, and then he must, as far as possible, avoid stimulant food and much walking exercise.

In the remarks I have hitherto made, I have merely sought to elucidate the general pathology and treatment of gonorrhœa, and, accordingly, have avoided all details connected with complicated cases, where the disease does not occur in its simple form in a constitution and urethra previously sound.

Where strictures, and previous diseases of the urethra, bladder, prostate exist, the simple treatment I have recommended is longer applicable; and the same observation applies to cases lly treated, neglected, or of long standing, and to patients h a weak or scrofulous constitution.

With reference to injections, let me add a few particulars cerning their strength. We should trust in the beginning weak solutions, such as one or two grains of sulphate of zinc the ounce of water, which may be used five or six times in the y. When we increase their strength, they must be employed s frequently. It is seldom necessary to use a solution stronger n three grains to the ounce. I am in the habit of employing h a solution, combined with one or two drachms of mucilage, d about ten grains of prepared lapis calaminaris in powder. ay great stress on the addition of the mucilage; it veils the ringent and irritating qualities of the metallic salt, and ders it more likely to become entangled, and thus be detained some time in contact with the mucous membrane of the thra. How the lapis calaminaris acts, unless on a mechanical nciple, it is difficult to explain; but of its utility I am certain, ving long used this combination as recommended in Thomas's actice of Physic. Some add a little balsam of copaiba; but has the disadvantage of betraying the patient's secret by its our.

As I am now only engaged in explaining the general principles which the cure is to be conducted, I need not enumerate the at variety of astringents which may be employed. One portant piece of advice I can give you on this point is, to nfine yourselves, as far as possible, to the use of the same tringents. Two or three will suffice for all necessary com- ations. By doing this, you will become accustomed to their ects, and will, by habit, be enabled with great accuracy to dge whether it is proper to increase or diminish the strength the solution in any particular case.

Another rule of practice is, that you must at intervals make patient leave off injecting, say every second day, for a certain mber of hours, for instance twelve, before you examine him, order that the immediate effects of the astringent may have bsided so far as to allow you to estimate the actual state of disease. It often happens that the improvement is scarcely perceptible until the injections have been intermitted. This observation leads to another rule, viz., that when you are using strong injections, and have made an evident impression on the disease, you may leave them off every second or third day, according to circumstances, so as to ensure their not being continued beyond the time they are actually necessary. With these precautions I can confidently recommend the use of injections, and maintain that they do not render the patient more than usually liable to strictures, sympathetic bubo, or swelled testicle.

Strictures often occur in men who have never had a gonorrhœa, and swelled testicle and sympathetic buboes are frequently met with in cases of clap, where injections have not been used at all. I do not mean to deny that injections, imprudently or unskilfully managed, may give rise to these accidents. Of this there can be no doubt, nor is the cause very obscure; for we can readily conceive that an injection, ill adapted to the sensibility of the parts, may increase the urethral inflammation. Of all matters recommended for injections, the nitrate of silver seems most liable to this objection.

When gonorrhœa degenerates into gleet, which it is most apt to do in badly treated cases, and particularly in scrofulous habits, the cure is uncertain and troublesome; but as I have nothing to add to the practical precepts which your class-books contain on the subject, I shall not detain you by any further observations.

With respect to the gonorrhœal virus, I entirely concur in the modern opinion, recently confirmed by the experiments and inoculations performed by Ricord, that the poison which causes clap is different from that which gives rise to chancre and secondary symptoms; and that consequently it is quite unnecessary to make use of mercury in order to guard against constitutional sequelæ.

It is well that practical men have at length made up their minds upon this subject. Five and twenty years ago, when I commenced practice, we often concluded the cure of a gonorrhœa by a fortnight's course of morning and evening inunctions, employed for the purpose of protecting the patient against the danger of secondary symptoms.

Ricord employs injections of zinc, or lead, or nitrate of silver, in gonorrhœa, as soon as the acute stage has been removed, or its violence diminished by rest, antiphlogistic regimen, and twenty or thirty leeches to the perineum. He seems to employ the astringent injections generally after three or four days of antiphlogistic treatment, or from the very beginning, where the inflammation is slight. My experience has amply confirmed the assertions of our predecessors, that the same astringent applications which are proper after the diminution of the urethral inflammation, are also proper before it has completely formed itself. I should not have entered so largely on this subject, were I not aware that many practitioners condemn the use of injections altogether, and trust to rest and antiphlogistic measures alone—a method of treatment not only tedious, but in many respects most injurious.

It may be well to remark, that for many years I have not, *in recent and uncomplicated cases*, ordered cubebs, copaiba, or any such medicines internally, having succeeded to my entire satisfaction in the treatment of gonorrhœal patients by means of *general and local antiphlogistic measures combined with injections.* I differ in one point, and one only, from Ricord, who always begins by employing the anti-inflammatory diet and treatment. I have no objection to this method, except the inconvenience to which it necessarily puts the patient; for the loss of a few days and confinement to his room would in ordinary diseases be of trifling consequence; but in cases like the present the patient is always most anxious to avoid measures which could not be adopted without exciting suspicion.

To such an anxiety I would never yield, when my so doing could in the slightest degree retard or compromise the safe and speedy cure of the disease, neither of which risks are incurred by the prudent application of the plan I have recommended for the treatment of nascent gonorrhœa, and which is sanctioned by older writers, although repudiated and censured by the modern antiphlogistic school.

There are two affections said to be connected with gonorrhœa, and which consequently demand some consideration. I mean ophthalmia and arthritic rheumatism. There are many and highly respectable authorities in favour of the existence of such a disease as gonorrhœal rheumatism. Bacot says that the most usual form consists in a painful and swollen state of the knees and ankles, which seldom comes on until the decline of the gonorrhœa, and is most commonly met with in young men of a florid complexion and a delicate strumous habit; the articular affection is sometimes suddenly relieved by the appearance of an eruption of papulæ in clusters, or of pustules in very minute patches. Vetch describes this form of rheumatism as most intractable; I must refer you to his work and Bacot's for an account of the proper treatment, as I have not myself had sufficient experience in the disease to enable me to speak decidedly on the subject.

I saw with Dr. Nalty a gentleman about thirty-five years of age, who was afflicted with his fourth gonorrhœa, and in whom the order of symptoms was very remarkable and deserving of notice. In him each gonorrhœa ran the usual course, until the period when the running and urethral inflammation began to decline; then invariably (and that each of the four times he was attacked) his eyes became very painful, red, watery, and intolerant of light, presenting at first all the appearance of simple acute conjunctivitis, the result of cold. The conjunctiva covering the sclerotic soon became very much affected, but exhibited no tendency to secrete pus or become swollen, so as to form chemosis. In these important particulars the inflammation manifested differed from the purulent form. In a few days the sclerotic, and afterwards the internal tissues of the eyeball, were inflamed, and vision thus seriously impaired for the time. It does not, however, appear that the pupil was ever disfigured or the iris engaged, so far at least as concerns its margin and anterior surface. The redness of the eyeball was diffused and general, and not restricted, as in some cases of true internal syphilitic ophthalmia, to a zone at some distance from the cornea. This ophthalmia required very active local depletion, and yielded to treatment with much difficulty.

At our second visit we found that a very minute ulcer had formed on the cornea. The measures advised consisted of colchicum internally, slight scarifications of the inner surface of the lower eyelid, and on the next day a drop of the solution of nitrate of silver, four grains to the ounce, to be applied to the eye itself.

It is to be particularly remarked that during the increase and acme of the ophthalmia, the urethral discharge was always sened, but by no means cured; and if at any time this disarge increased, an immediate diminution of the violence of the hthalmia ensued. On this point our patient was quite clear. far, then, respecting the ophthalmia; let us now follow the rther development and succession of symptoms.

Invariably after the ophthalmia had lasted for some days, one other of his joints became affected with very acute inflammaon; and when this was about to subside in the joints first tacked, a new inflammation was set up in some other joint; us, the knees, ankles, elbows, &c., became successively and olently engaged, each in its turn being red, tender, painful, t, and refusing to allow its ordinary motions. The arthritic flammation was sometimes so violent as to leave an impairent of motion and a stiffness of the joint which continued for onths after he had otherwise perfectly recovered. When I saw m he had sciatica of the left leg, as well as the usual arthritis.

This case, gentlemen, is very instructive, and proves beyond a ubt the existence of an arthritis and an ophthalmia consequent gonorrhœa; as the ophthalmia had all the characters of rheuatic ophthalmia, we must attribute its origin to an impression ade on the constitution by the gonorrhœa: here, as the ticular inflammation and the ophthalmia had one and the same aracter, and as the affection of the joints could not of course produced by contact of the urethral discharge, we must admit at this could also have nothing to do with causing the inflamtion of the eye. This is important, and demonstrates that least one species of ophthalmia is caused by gonorrhœa ependent of direct infection. The existence of the sciatica lso very remarkable.

Sir Philip Crampton, who afterwards saw this case in contation, says that he has met with several similar, and he is opinion that some of them essentially consisted in a gouty ammation of the eye and joints, excited and called into ion by the gonorrhœa.

Sir A. Cooper, who was the greatest of British surgeons, says t gonorrhœal rheumatism is not an unfrequent disease. He cribes a case very similar in details to that I have already l before you:—"I will give you," says Sir Astley, "the tory of the first case I ever met with; it made a strong ression on my mind. An American gentleman came to me with a gonorrhœa; and after he had told me his story, I smiled and said—do so and so (particularizing the treatment), and that he would soon be better; but the gentleman stopped me and said, 'Not so fast, sir; a gonorrhœa with me is not to be made so light of—it is no trifle; for in a short time you will find me with inflammation of the eyes, and in a few days after I shall have rheumatism in the joints; I do not say this from the experience of one gonorrhœa only, but from that of two, and on each occasion I was affected in the same manner.' I begged him to be careful to prevent any gonorrhœal matter coming into contact with the eyes, which he said he would. Three days after this I called on him, and he said, 'Now you may observe what I told you a day or two ago is true.' He had a green shade on, and he had ophthalmia in each eye; I desired him to keep in a dark room, to take active aperients, and apply leeches to the temples. In three days more he sent for me rather earlier than usual for a pain in one of his knees; it was stiff and inflamed. I ordered some applications, and soon after the other knee became affected in a similar manner. The ophthalmia was with great difficulty cured, and the rheumatism continued many weeks afterwards. This case struck me very forcibly, and I asked Mr. Cline whether he had ever seen the rheumatism proceeding from gonorrhœa, and he replied, 'Several times.' The next case did not surprise me so much, and now and then, ever since, I have met with similar ones. It is by no means an unfrequent occurrence for gonorrhœa to produce a rheumatic and painful affection of the joints; whether it be by the absorption of the poison, or the constant irritation produced by the irritation of the urethra, I do not know, but certain it is that gonorrhœa produces ophthalmia and rheumatism, and that when not a single drop of matter has been applied to the eye. The inflammation generally attacks both eyes, and is of long duration; it requires the same remedies as are used in gonorrhœa; balsam of copaiba or some form of turpentine must be exhibited; either the oil of turpentine, balsam of copaiba, or olibanum. I do not recollect to have met with a description of it in any surgical work, but whoever has practised at all must have frequently met with it."

Such, gentlemen, is the information which this celebrated man has given us on this subject. From this it is quite clear that he does not define or point out the different species of onorrhœal ophthalmia and their different exciting causes; either is his description of the American's sore eye very full nd explicit; it is enough so, however, to prove that this phthalmia was not purulent, but rheumatic.

It does not seem necessary to assume the absorption of any poison to account for arthritis and ophthalmia occurring in gonorrhœa. Of all parts of the body the joints are the most iable to be associated in inflammation with distant parts, and hence ordinary arthritis so often gives rise to pericarditis, hepatitis, ophthalmia, &c., &c. We do not think it necessary to assume the absorption of a poison when a urethral stricture occasions ague—an occurrence quite as remarkable as the production of arthritis by gonorrhœal irritation of the urethra.

When any important part of the body becomes inflamed, there is no saying in what organ diseased action may commence as a consequence. Thus I have seen an inflamed state of the esophagus, caused by a clumsy probang roughly passed, give ise to inflammation of the mucous membrane of the bladder.

When Sir Astley Cooper published his Lectures in 1823, the ubject of gonorrhœal ophthalmia had not received the attention s importance merits, and opinions of surgeons were very varied nd contradictory, of which I can offer no stronger example than he fact that, in part of that very course of lectures, Mr. Green, ho lectured for a long time during Sir Astley's absence, xpressed himself in a manner quite opposed to the opinion of ir Astley, who had said that gonorrhœa is capable of producing n ophthalmia through the medium of the constitution. In act, nothing satisfactory was published on gonorrhœal ophthalmia ntil Mr. Lawrence's Treatise on the Venereal Diseases of the ye appeared in 1830, of which work 127 pages are occupied ith a description of the three different species of gonorrhœal phthalmia, with numerous cases.

This distinguished surgeon and physiologist has done more han all who preceded him to illustrate this subject, and I most ordially recommend to your attention the above invaluable reatise. He denies (and in this I agree with him) the assertion, ereinafter to be noticed, that the matter from a gonorrhœal rethra cannot by contact produce disease in the eyes of the atient himself, and he brings forward many examples to prove he contrary. He divides the disease into three species:—1st, acute or purulent and destructive gonorrhœal inflammation of the conjunctiva; 2nd, mild gonorrhœal inflammation of the conjunctiva; 3rd, gonorrhœal inflammation of the external tunics and iris.

It is of importance to recollect that this latter species does not exactly deserve the name of metastatic, for it often comes on without any, or at least a very partial, subsidence or diminution of the urethral discharge.

Some authors, as Scarpa, Boyer, Pearson, and Beer, deny the possibility of a severe purulent ophthalmia being caused by the contact of any gonorrhœal fluid, and assert that its application to the eye merely gives rise to a trifling and temporary irritation. More recent writers do not, however, acquiesce in this opinion. Thus, Mr. Middlemore sums up the matter with the two following conclusions:—"1st. That by far its most usual mode of production is by the contact of gonorrhœal matter, proceeding from the urethra or vagina of some other person, not from that of the individual himself. 2nd. That it is extremely improbable that any individual can communicate the disease from his urethra to his conjunctiva by touching the latter membrane with the gonorrhœal discharge."

Were this latter position established on a secure and firm basis, I would regard it as one of the most interesting and curious results of modern investigation. I must, however, confess that I feel very doubtful of its accuracy, and that for the following reasons:—In the first place, I have seen a case where a gentleman was most probably infected with purulent ophthalmia in consequence of matter from his own urethra being brought into contact with his eye. I say most probably, for the nature of the case almost necessarily precludes the attainment of certainty with regard to such matters, for very obvious reasons. In the second place, Ricord's experiments proving the facility with which a chancre can be produced in any part of the skin by means of matter taken from a chancre in the same individual—these experiments, I say, throw a heavy shade of doubt on the probability of the general doctrine, that an infectious fluid produced by one part is innoxious to the same person in another part.

The poison of itch manufactured by one part of the skin is often transferred by the nails to another part, and the clothes orn by an itchy patient are capable of not only producing the isease in another, but in himself when cured. Many other imilar examples might be brought forward, but enough has been aid to show that the general analogy is not favourable to an pinion, which I cannot help thinking has been founded on facts nd experiments not sufficiently numerous or varied. Dr. Vetch, ndeed, " took matter from the eyes of persons labouring under cute purulent ophthalmia, and applied it in each case to the urethra of the same individual. No disease was excited. But when he applied the same matter to the urethra of a different individual, it produced a violent gonorrhœa; hence he argues that a person cannot infect himself, but may another."

You observe that this is pre-eminently a practical question; for f we agree in Dr. Vetch's conclusion, it is quite needless to mpress on our gonorrhœal patients the necessity of scrupulously uarding against the danger of infecting their eyes by the matter ecreted by their urethras. Where the danger is so great, and here, should such an infection be possible, the loss of one or oth eyes may be the result, I would never trust to mere habits f cleanliness; I would enforce them by the fears of infection.

With respect to the production of a violent and destructive urulent ophthalmia, in consequence of the application of gonor-œal matter to the eye, there can be no doubt whatsoever. Mr. awrence cites many examples, and I have seen several. Thus, me years ago, a poor woman made use of a vessel soiled by norrhœal matter to wash her own face and two of her young ildren. They all got purulent ophthalmia, and two left this spital blind. On the whole, gentlemen, I think that we can fely draw the following conclusions concerning gonorrhœal hthalmia :—

1st. A species of severe ophthalmia may be produced through e medium of the constitution, in persons liable to gonorrhœal eumatism or arthritis. This species attacks the conjunctiva, lerotica, and internal tissues, and resembles gouty and rheu-atic ophthalmia.

2nd. Another dreadfully violent species of ophthalmia is pro-uced by the contact of gonorrhœal pus. This closely resembles gyptian ophthalmia.

3rd. It is probable that another and a much milder species of njunctivitis is produced by the contact of gonorrhœal discharge of less violence; and such was the opinion of the celebrated Beer. The fluid taken from the variolous pustule or the vaccine vesicle during their early stages will not communicate their proper infection; in the same way the discharge from an incipient or declining gonorrhœa may act very differently on the eye from the puriform fluid secreted by the urethra during the acme. The only doubt which remains on my mind with respect to this milder conjunctivitis is, whether it, too, may not be produced through the constitution. We have seen that a violent ophthalmia and arthritis may thus arise, and consequently we can easily imagine it possible for the same cause to give rise to a constitutional impression capable of originating a mild ophthalmia unaccompanied by arthritis.

In the gentleman whose remarkable case I have related, and who was once treated for the ophthalmia by Mr. Wardrop, the very first gonorrhœa he had ended in the formation of bad deep-seated stricture, although the plan of cure adopted had been from the beginning antiphlogistic, and he had been confined to bed for the greater part of the time, and kept on low diet on account of the arthritis. This, with numberless other similar facts, proves that the chances of stricture are augmented by whatever prolongs the duration of the urethral disease, particularly in strumous habits, such was that of the gentleman referred to. No doubt, injections injudiciously applied may increase or prolong urethral disease, and thus occasion strictures; but if they diminish or cut short inflammation, I cannot conceive on what principle they can originate strictures.

LECTURE LXIII.

YPHILIS.—THE MERCURIAL AND NON-MERCURIAL PLANS OF TREATMENT.—DR. FRICKE'S INVESTIGATIONS.

ITLEMEN,—The pathology and treatment of the venereal ase have engaged the attention of our ablest men since the ; of Hunter, and have of late years, as you are all aware, ergone considerable modification and improvement. Still, ever, much variety of opinion exists respecting both these jects, as may be proved from the following facts:—In this , for instance, the late Mr. Colles and Mr. Carmichael pro- ed opinions very different from each other, and their high ıtation ensured to each a numerous host of followers. We e here, consequently, two rival schools, whose teachers eminate opposing doctrines. This want of fixed opinion is in London as well as Dublin, and displays itself in a less marked manner amongst the practitioners of Paris, nburgh, Vienna, and Berlin. If you compare together the les of practice pursued by that highly-instructed and in- gent class of medical men—the surgeons of the British army ou will find the same want of unanimity, and consequently the ates of the venereal wards of one regiment are often treated manner the very reverse of that pursued by the surgeon of other regiment stationed in the same barrack, of which I seen some striking instances in the Dublin garrison. ters are quite as bad in the Prussian army. In a letter h I received from Dr. Robert Froriep, the distinguished ologist of Berlin, he says, "I have taken advantage of the tion to examine the Medical Reports of the Army, having ined the kind permission of the physician-general, Dr. meier, for that purpose; but I could not make out anything y to assist you in your researches; in fact, these documents ish data apparently the most contradictory. Thus, one rt praises the mercurial, and another the non-mercurial treatment; while in almost no case do we find the symptoms, treatment, and results detailed with sufficient precision to enable us to arrive at anything like satisfactory conclusions."

In the following lectures I do not propose to solve the difficulties which embarrass this important question, neither do I come forward as an advocate on either side; my time is too much occupied to allow an examination of this subject in all its details; and without such an examination it would be premature, nay, impossible to arrive at a satisfactory conclusion. My object in touching on the matter is less ambitious; and I come forward merely as a contributor of materials, chiefly derived from German sources, and partly my own, which materials may perhaps prove useful to others employed in the elucidation of this important subject. From an extensive correspondence with practitioners in various countries of Europe, I find that everywhere a great division of opinion exists; and we have reason to believe the same of North America. In the latter country, however, the non-mercurialists are gaining ground, as appears from articles published in the American journals. Under these circumstances, and in this embarrassed state of opinions, some attempt ought to be made to obtain more accurate data. If the matter were taken up as its importance deserves it should be, by some medical body or association of eminence, individuals might be encouraged to inspect the chief hospitals of Europe and America, and thus obtain accurate information. Were application made, from a proper quarter, to the heads of the medical department in the English, French, Prussian, and Austrian armies, it would, no doubt, elicit much important matter. Until some public body, or some enterprising and zealous individual, collects from every quarter that information which is so easily attainable on the spot, but so difficult to acquire at a distance, this great practical question must still remain unsolved; for its solution will be only then possible when the results of the opposing methods have been ascertained and contrasted, in various climates and among various races of mankind.

It is allowed by all continental writers of celebrity that British practitioners have the credit of having been the first to point out the benefit of the non-mercurial treatment, in many cases where mercury was supposed to be necessary. Matthias deserved great praise for the discrimination and judgment he evinced in disıhing the effects of mercury acting injuriously on the ution, from the effects of the venereal poison.

Carmichael, of Dublin, was, however, the first who ally improved this important practical branch of our pro- , and taught in a clear and scientific manner when mer- ıght or ought not to be exhibited. Mr. Green, of Bristol, blished, in the second volume of the Transactions of the cial, Medical, and Surgical Association, an excellent of the history and progress of opinion on the non- ial treatment, and has added many interesting cases ed by himself. From what he has seen and read he the following inferences:—that every form and stage of ıl, except iritis, can be completely and better treated t mercury than with it; that in some cases mercury not ıils altogether to cure, but aggravates the disease, and re is not a specific; and what have been considered as f the worst secondary cases of syphilis result from mercury ·from the very means used to cure the disease.

Thompson, of Edinburgh, zealously advocates the non- ial treatment, and supports his views by 400 cases treated t mercury. Mr. Green thinks Mr. Abernethy's test n true syphilis and pseudo-syphilis (namely, that the requires mercury for its cure) erroneous. Mr. Rose, ı to the Guards, says he succeeded in curing all ulcers on ts of generation, with all the constitutional symptoms to they give rise, without mercury. He treated 120 cases ; any unfavourable result.

Guthrie treated nearly 100 cases of primary sores without y; and thinks it an established fact, that every kind of ı the genitals is curable without mercury; he, however, that, in some cases, a gentle course will expedite the cure, s not consider it a specific for the venereal.

Thompson remarks that, in his cases treated without y, there were not any of those deep and foul ulcers of the f the throat, of the mouth and nose, or the painful ns of the bones, which are stated by every writer on ; as the general products of that disease. In 154 cases, by him without mercury, iritis followed in 1. In 417 imilarly treated by Dr. Hennen, iritis occurred only in Hennen treated 105 cases of primary sores without mercury; secondary symptoms followed in 11 cases; all were cured without mercury, except one obstinate and anomalous case.

In the report from the Army Medical Department, from December, 1816, to December, 1818, there appear to have been treated, for primary venereal ulcerations on the penis (including not only the more simple cases, but also a regular proportion of those with the most marked characters of syphilitic chancre, as described by Hunter) 1,940 cases; of these 1,940 cases, 96 had secondary symptoms of different sorts; of these 96 cases of secondary affections, mercury was had recourse to in 12, for various reasons, as stated in the report. In the 1,940 cases of primary symptoms, mercury was used in 65, for reasons also assigned. If we deduct the 65 and 12 cases in which mercury was used, from 1,940, 1,863 cases remain *completely* cured *without* mercury. The average time required for the cure of primary symptoms without mercury, when bubo did not exist, has been 21 days; with bubo, 45. Average period for cure of secondary symptoms, without mercury, has been from 28 to 45 days. In the same period, 2,827 cases of primary symptoms were treated with mercury: secondary symptoms occurred in 51 of them. The average period for the cure of primary symptoms without bubo was 33 days—with bubo, 50 days; and for the cure of secondary symptoms, 45 days.

Mr. Green treated 100 cases without a particle of mercury, either internally or externally. The primary sores were treated with sedative and astringent lotions, or simple ointment; all these sores possessed some of the characters of the true Hunterian chancre: from 14 to 30 days was the time in which they were generally healed. One case of chancre resisted all applications for four months, till the person was removed to the sea-side, where it was healed in three weeks. Of these 100 cases, buboes supervened in 16: of which 6 only suppurated. Constitutional affections, of one kind or another, followed in 9 cases; these were—cutaneous eruptions, papular in 3, pustular in 2, vesicular in 1, vesicular and scaly in 2. These eruptions, at their commencement, were generally accompanied by pains in the limbs, and more or less fever. One of the cases of pustules closely resembled small-pox; he has generally seen this particular form occur in persons of strong constitution. The vesicular and scaly eruptions occurred in delicate persons, and were very obstinate;

re throat occurred in 4 cases; in 3, conjoined with eruptions.
riostitis occurred in 2 cases, which yielded to counter-irritation.
iere was not one case of iritis.

Mr. Green thinks that the use of mercury in primary symp-
ms should be given up altogether; but that in some cases of
condary it may be of use. From a comparison of facts, primary
res are sooner cured where mercury is not given. As far as
ie Army Medical Reports go, secondary symptoms followed
ore frequently where mercury had *not* been given, but they
ere not so severe as those which occurred after mercury had
en given. The cases in which he thinks mercury of use are
iose in which the symptoms get into an indolent condition, and
come a chronic disease. The superficial ulceration of the
iroat, which he considers truly syphilitic, frequently becomes
ianged by mercury into deep excavated ulcers of the tonsils.

There can be no doubt, gentlemen, that mercury may be given
a person previously healthy, in such a manner as gradually
undermine the constitution and destroy health; of this the
rkmen employed in quicksilver mines afford a melancholy
ample; and it is a striking and remarkable fact, that the *mer-
rial cachexy* thus produced resembles in many respects the
nereal. Emaciation, night sweats, pains in the bones, nodes
d osseous caries, cutaneous eruptions and ulcers, redness and
eration of the throat, loss of appetite and debility are common
both. It is quite certain that these cachexies, when pure and
mixed, may, by an experienced examiner, be distinguished
m each other with facility; but the case is widely different
ien they co-exist in the same constitution, each modifying and
teriorating the other. These two cachexies combined in the
me individual occasion, according to the predominance of
her, and the simultaneous and sinister presence of a weak,
rofulous, or scorbutic habit, those endless varieties of deplor-
le suffering which we are so often called on to witness in cases
judiciously, ignorantly, or negligently treated. I must refer
u to authors for a more detailed and accurate account of the
effects of mercury. Dr. Hennen has written with great clear-
ss on this subject: he concludes by remarking, "The most
oublesome of all its effects is the phagedænic ulceration which
often induces in chancres and open buboes; and the disposi-
n to fresh ulcerations of a spreading and intractable character,

which it gives rise to in parts where the skin had not been previously broken; in the throat most severe ulcerations are excited by it; erosions of the gums and palate are produced; and the papulæ and other eruptions of the skin, which so often appear as a secondary form of the disease, are frequently exasperated into open ulcerations. I have not seen a single case of ulceration succeeding to a cutaneous eruption in the military hospital since the non-mercurial treatment has been adopted, except where mercury had been long and irregularly tried."

The example set by British surgeons was soon extensively followed on the Continent, and many reports of the success of the non-mercurial treatment were published in France; several of these have appeared in the English periodicals; and some important documents of this nature have been cited by Mr. Carmichael, in a paper published in the 12th volume of the *Dublin Medical Journal.* As you can all refer without difficulty to French publications, I shall not detain you by quoting their contents, but shall at once proceed to submit to your consideration a translation of certain German writings, which contain important data connected with our subject, but which are not easily procurable, and cannot be understood without a very accurate knowledge of the German language and German pharmacy.

To the first document I attach great value, having myself witnessed the progress of the treatment in the splendid and admirably-arranged hospital at Hamburgh, under the care of that able surgeon, Dr. Fricke, whose assistant, Dr. Günther, took all the cases, and afterwards tabulated the results. Of course I cannot do more than present to you the general plan of treatment adopted, and the general conclusions arrived at. In the work itself numerous examples are given of each variety of primary and secondary affection, and the details of the treatment are accurate and full. As the non-mercurial plan excited much interest among German physicians, its details were watched with the most scrupulous accuracy, both by the medical men of Hamburgh, and by many who came from different parts of Germany to witness the progress of so important an experiment. That the details and results have been given by Drs. Fricke and Günther with the greatest fidelity I know, both from what I myself observed, and from what I heard from Dr. Oppenheim and others.

shall now proceed to read for you copious extracts from Dr.
ke's work, and afterwards communicate information I have
ntly obtained from this eminent surgeon on the subject. The
extract is on the treatment of syphilis, during the years
4, 1825, 1826, 1827, reported by Dr. Günther, Assistant
geon.

'The treatment of syphilis in our hospital may be divided
two periods. During the first, mercury was employed as
chief remedy; during the second, the disease was treated
r the non-mercurial plan. The former comprises with males,
ace of eighteen months and a half (from January, 1824, to
y, 1825); with females, of twenty-two months (from January,
4, to October, 1825). The latter includes, with males, a
iod of two years and five-and-a-half months; with females,
wo years and somewhat more than two months.

FIRST PERIOD.

Treatment of Syphilis with Mercury.

'I shall now communicate the principal facts and results of
mode of treatment, as the profession can have no particular
rest in the more minute details, which can be useful only
he way of comparison. The forms of disease observed during
first period may be seen in the annexed tables. On looking
r them, a considerable difference will be seen between them
those of the second period: syphilis having exhibited itself
much more malignant form in the first period. Nocturnal
ns, caries of the nasal, palatine, and other bones, obstinate
extensive cutaneous eruptions, general lues, syphilitic
hexy, &c., were among the ordinary phenomena; while in
second period they were of rare occurrence, and observed
y in those who had been subjected to long and injurious
rses of mercury.

'If we compare the forms of disease occurring in the same
ividual at different times, before and during the first period,
shall not unfrequently perceive a certain gradation from a
urable to an unfavourable constitution of disease; that which
menced with superficial ulcers of the genital organs subse-
ntly appeared as bubo, then as ulceration of the throat, next
an extensive cutaneous eruption, which often gave rise to
rations, then harassed the patient with nocturnal pains,

nodes, caries of the bones of the face and loss of the hair, until it terminated in syphilitic cachexy, general and incurable lues, consumption, emaciation, and dropsy.

"The mode of treatment employed during this first period was various, and regulated by the peculiarities of each individual case. No undue predilection was shown for any particular preparation of mercury. The soluble mercury of Hahnemann was chiefly employed, in doses of a grain twice a day; in a great many cases calomel was used in the same proportions. Corrosive sublimate was given in solution (gr. iij. ad ℥vj.), generally in combination with a little opium or with the decoction of columbo; a table-spoonful three times a day. In obstinate cases calomel and corrosive sublimate were administered alternately in the form and doses already mentioned; and this mode of administration was looked upon as very powerful and efficient. On one occasion calomel was given in large doses (ten grains); and 33 cases were treated with mercurial frictions, after the manner recommended by Rust. The latter, which were employed in the cases of 13 females (in some individuals twice), were had recourse to only in obstinate and extensive forms of the disease. When syphilis was attended with distinct inflammatory symptoms, the antiphlogistic treatment was put into operation before mercury was administered.

"With respect to the duration of treatment, a remarkable difference will be perceived on inspecting the tables of both periods. I have taken an average of the number of days spent in hospital, as well by patients labouring under the peculiar forms of syphilis, as by the general class, and added it to the tables. The relative proportion of this cannot be always easily stated, for no general law can be deduced from a few cases; but, on comparison, a difference in favour of the non-mercurial plan of treatment is readily perceived.

"With regard to the certainty of cure, so far as the mercurial treatment is concerned, we must say, with many of our unprejudiced colleagues, that we are convinced by bitter experience that syphilis very often returned in the secondary form, after the most cautious use of mercury, the most careful selection of the preparation, the strictest attention to diet, and a proper observation of precautionary measures. Of 573 patients treated during the first period, 165 (*i.e.*, nearly one-third) were attacked with secondary symptoms. All these were treated with mercury for the primary symptoms, although, it is to be observed, the smallest portion of them had been under our care. Of those patients treated during the second period, who were attacked with secondary syphilis, by far the greater portion had at an earlier period, and before admission, or while in hospital, used mercury for the cure of the disease. Many patients in whom the disease was supposed to have been eradicated came back (particularly after the use of mercurial frictions), with caries of the bones of the face; some of these were afterwards cured without mercury, others are still under treatment.

"On examining the bodies of those who died while under treatment, particularly during the use of mercurial frictions, and while the mouth was affected, we did not find the parotid, sublingual, or pancreatic glands enlarged; they were, however, harder than usual, and, when slit open, had in a remarkable degree the unpleasant odour attendant on salivation. In one case the submaxillary glands were enlarged, but, with the exception of some slight induration, otherwise unchanged. In the case of a young woman who had frequently used mercury, and who died twenty-two days after a protracted course of frictions—on boiling some portions of the thigh-bone (the head, neck, and trochanter) and of the tibia for an hour in water, we found somewhat more than half a drachm of mercury. In two or three similar cases, where so much mercury had not been employed, we could not detect any.

SECOND PERIOD.

Treatment of Syphilis without Mercury.

"When this mode of treatment was introduced into our hospital by Dr. Fricke, he at first submitted only a small number of patients to it, and selected chiefly those whose future prospects depended on their being cured in the speediest way. Having afterwards discovered, contrary to his expectation, that the disease was cured more rapidly this way, and relapses much fewer and slighter, it was extended to all cases, with such modification as experience suggested.

"At this present time (February, 1828), after a trial of two years and a half, and the successful treatment of more than a thousand patients, the results of this treatment have proved so favourable, that there appears no reason for lightly abandoning it, or returning to the former plan of treatment. As already stated, patients are cured in a much shorter time than before, and leave the hospital with much healthier looks. All the unpleasant phenomena attendant on salivation no longer harass them. Formerly, notwithstanding the greatest attention and cleanliness, it was impossible to remove the foul smell from the venereal wards, or to keep the rooms or beds clean; the air was tainted with the offensive odour of salivation and syphilitic caries; and filth was the order of the day in all the wards occupied by patients under full salivation. At present there is not a trace of this air in a ward containing constantly 60, 70, and sometimes 100 patients; and the venereal department of the hospital rivals the other divisions in purity of air and cleanliness. Syphilis, too, seems to become gradually more simple —at least it never appears in the same malignant form as before, where little or no mercury has been used. As every medical man is allowed to visit the hospital, any one may convince himself of the truth of these statements.

"From the strict surveillance over prostitutes observed by the police, the attention and experience of the surgeons appointed by the government to inspect them, and from the circumstance that such females come to our hospital for the relief of all diseases under which they may happen to labour, we are enabled to keep a strict control over their diseases. Those who live in the town, constituting three-fourths of them, under the jurisdiction of Hamburgh, and those who live in the suburb named Hamburgerbery, are examined twice a-week by two government surgeons. Every female is obliged, each time, to bring a book, in which her state of health is entered. Those who are found diseased are immediately sent to hospital. Unfortunately, we cannot exercise the same control over males, and with the same accuracy and precision. A large portion of the males under our care leave Hamburgh, and many of them, when they get fresh infection or secondary symptoms, apply to other physicians of this city, and are generally treated with mercury. Hence, of course, in such cases the accuracy of the result is disturbed and rendered uncertain. Many who are cured and remain well do not keep the promise which is exacted from all who are dismissed cured, namely, to let us see them again. Some, in fine, lose patience, and leave the hospital before their cure is entirely completed. This, however, has not occurred for the last half year. All these circumstances combined render it extremely difficult to ascertain the truth in each individual case. There remains, however, a number of male patients who are kept constantly under observation.

GENERAL TREATMENT.

"Four conditions we endeavour to fulfil, viz., cleanliness, rest, a strict diet, and (in a therapeutic point of view) an antiphlogistic plan of treatment.

"*Cleanliness* is of the greatest importance towards a speedy and successful termination to the cure; several patients were cured by the use of warm baths and ablutions. On the other hand, a neglect of this precaution has been the cause either of the origin or of the deterioration of many forms of the disease. On entering the hospital, all syphilitic patients, unless perfectly clean, are put into a warm bath. With women this is seldom requisite, with men almost always. The diseased parts, and those in the vicinity, are frequently washed with warm water. This operation requires to be looked after more carefully in men than in women, the latter being naturally more cleanly. Again, places on which ulcers, condylomata, and exanthemata are seated, the glans and prepuce in gonorrhœa, and all carious bones, are cleansed of pus, mucus, and dirt, by frequently washing, sprinkling, rinsing, and syringing with warm water. Pus is never allowed to collect on ulcers, or on the prepuce or glans in gonorrhœa. A most important rule is, to prevent excoriations, chancres, and condylomata from coming in contact with the healthy mucous surface or skin; as, for instance, in the angles between the carunculæ myrtiformes and nymphæ, between the labia, between the testicle and the upper part of the thigh, &c., as in course of time not only the sound parts become excoriated or ulcerated, but also the disease protracted and often very much exasperated. We also take care to prevent excoriations, exanthemata, and condylomata from forming in the angles and folds of the genital organs from the matter of gonorrhœa or ulcers. To accomplish this end we put pieces of linen or charpie, wet with spring water, saturnine lotion, or black wash, into each fold or angle, changing them three or four times a-day, and sometimes oftener, according to circumstances. This attention to cleanliness is also of the greatest importance after the cure is finished, because the cicatrices are apt to become raw and turn into excoriations or ulcers when neglected. This has frequently occurred in patients discharged cured, who, on being admitted a second time, have been again cured by strict attention to cleanliness.

"*Rest* is necessary, particularly during the first period, and where the disease exhibits an inflammatory character. Hence, all patients, on admission, are confined to bed. In women this regulation was enforced throughout; on the other hand, males were generally permitted, and with advantage, to walk about during the latter period, where a chancre or opened bubo had healed up to a certain point and then become stationary. The reason of this difference between the treatment of males and females was particularly this, because in the latter the diseased parts are not so easily protected from contact with the sound skin or mucous membrane, from friction, or from becoming wet with pus, mucus, &c. Pregnant women were permitted to walk about a little.

"With regard to *diet*, each patient received at first every day four ounces of bread, three pints of gruel, and six spoonfuls of vegetables, at noon; the latter varying according to the season of the year. They were not allowed to drink beer, brandy, or water; their common drink being thin gruel. As soon as the characteristic appearance of the ulcers began to vanish, or an improvement took place, the diet was gradually made more nutritious, according to the state of the constitution and the wants of the patient; and when matters went on favourably in this way, meat was allowed. We have departed from this rule in the case of very weak individuals, and persons who had been debilitated by mercurial courses, allowing these a nutritious diet from the commencement. In the case of females, who seldom remained in hospital longer than three or four weeks (some not more than fourteen days), and who require less food than males, the first kind of diet was generally continued until the termination of the cure; in males it was usually changed a fortnight or three weeks after the character of the disease began to improve. The appearance of those who were dismissed after a long stay in hospital was that of men in perfect health, and (where the strict diet had not been continued too long) not at all deficient in bodily strength.

" The *therapeutic* measures employed were by no means comlicated, and have been latterly rendered more simple. At first very patient who could bear it, whether male or female, was looded to eight, ten, or twelve ounces. Experience, however, as taught us that in most cases general bleeding may be disensed with, and that the end in view may be accomplished in s short a time, and with equal success, by observing the rules lready laid down. Hence venesection is at present confined to ases of plethoric habit or high local inflammation, and consequently not very often employed. In some peculiar forms of lisease leeches were used. In cases of secondary syphilis, particularly where the disease came on after the non-mercurial treatment, venesection was occasionally employed. The treatment was generally commenced with the following medicine :—

" ℞. Sulphatis Magnesiæ, ℥iss.
Aquæ Fœniculi, f℥viij. Misce.

"Of this a table-spoonful was administered three times a-day, or oftener, so as at first to produce several stools, and afterwards one during the course of the day. Occasionally a collection of bile in the primæ viæ, which sometimes occurred under the continued use of this mixture, required the administration of an emetic. The mixture was given to pregnant women merely in such doses as to keep the bowels regular. In secondary syphilis the decoction of woods and nitric acid was also employed. After a long and copious use of the laxative mixture, aphthous exoriations of a circular shape, and from three to four lines in liameter, were sometimes observed on the inside of the lower lip nd the mucous membrane of the cheeks. These had a flocculent ppearance, were painful, and surrounded with slightly-swollen dges. Frequently they were combined with small tallow-like loughs of the mucous membrane at the angles of the mouth, equently with raw surfaces. Persons of a scorbutic or rofulous diathesis were very subject to them. They were often ry obstinate, and required the use of acid or astringent gargles, uching with solutions of caustic, and the omission of the xative mixture.

" In a few cases we have seen a more than usually copious w of saliva after the use of nitric acid, frequently a slight crease in the cutaneous transpiration, or an increased secretion of saliva, after decoction of the woods had been employed for some time. Nitric acid was exhibited in the following form:—

" ℞. Acidi Nitrici, fʒss.
Syrupi simplicis, f℥j.
Decocti Avenæ, f℥xij. Misce.

Of this mixture a table-spoonful was given every second hour, and sometimes every hour. From eight to twelve ounces of the decoction of the woods were administered every day. Saponaceous baths were ordered for the sake of cleanliness, as also in some forms of eruption; in others, baths containing muriate of soda, or mineral acids, or corrosive sublimate, or (in cases of pains in the bones) caustic potash. Many kinds of lotions were also used for moistening the charpie and linen used in dressing the sores.

"CHANCRES ON THE GENITAL ORGANS.

"Of chancres (differing from excoriations by an excavated base and corroded edges) we have observed seven different species, distinguished from each other either by their appearance, their degree of intensity and extent, or by the mode of treatment they require.

" *1st Species.*—Chancres with a clean, and, in general, copper-coloured base; the base deeper than the edges, the edges sharply cut, but not raised above the epidermis; diameter from one to four or six lines. They constitute the transition from the third species of excoriations.

" *2nd Species.*—Chancres with an ash-coloured and, usually, soft base; the base deeper than the edges, the edges cut, but not raised above the epidermis; the diameter from one line to one or two inches.

" *3rd Species.*—Chancres with an ash-coloured and, in general, hard base; the base deeper than the edges, the edges sharply cut, indented, raised above the epidermis, everted, often of a dark red colour, and inflamed; diameter from one to four or five lines. (The Hunterian chancre.)

" *4th Species.*—Chancres with a depressed base covered with an adhesive, viscid, greyish-green matter. The base is irregular, in many places deeper, in others shallower. The edges cut, raised above the epidermis, everted, often intermixed with livid black (gangrenous) spots; the circumference inflamed; diameter ree or four lines to an inch or two. They are always in on with great destruction of the neighbouring parts. :hael's phagedænic chancre.)

: *Species.*—The base scarcely deeper than the epidermis, ch deeper than the edge; the edge raised above the base epidermis, not sharply cut, rounded off towards the base, s surrounded like a rampart. In general the base was -coloured, but for the most part of a pale reddish colour, any appearance of commencing granulations. These s were usually attended with a copious discharge, and t to produce excoriations of the first species on the parts r immediate vicinity. With the edge they generally ed from four to six lines in diameter. They were frecovered with a scab. (Transition to the semiglobular ma.)

Species.—The base raised above the epidermis, of a and, in general, bluish red appearance; no distinctly edges, the surrounding skin not inflamed.

Species.—Hemorrhoidal chancres. Raw surfaces formed d hemorrhoidal tumors, with a whitish but not ash-l base. The tumors themselves were flat, compressed, l of fissures. The tumors often exhibited excavations ash-coloured base and corroded edges. These chancres ttended with a copious discharge, and were extremely (Transition to the quadrangular condyloma.)

have frequently observed a transition from chancres of it species to the second, third, and fourth, produced by , improper diet, constant bodily labour, and want of on to cleanliness. We very rarely observed ulcers of the species among females, except in a few cases of maids who had venereal ulcers for a long time without having g done for them. In men we generally observed them the glans, in the angle between it and the prepuce. The on from the first to the other species was sometimes w, sometimes exceedingly rapid. Artificial ulcers, formed imes with corrosive sublimate on females, and twice with fernalis on males, resembled chancres of the third species. th respect to the origin of chancres, those of the four ecies were formed in a threefold manner. In the first he well-known vesicle, filled with clear pale lymph, formed on the sound or inflamed skin. The circumference became inflamed, the lymph changed into purulent matter, the vesicle burst, and gave rise to a chancre of the first species, which, after the lapse of twenty-four or forty-eight hours, became converted into a chancre of the second species, and, under the operation of the circumstances already mentioned, into one of the third or fourth species. We observed this mode of origin very often in men, particularly in chancres of the glans, but very seldom in women. In the second place, from excoriations, particularly of the third kind, chancres of the first species formed; these either remained in this state, or changed into one of the other three species. The change was generally very slow. Sometimes, however, a slight excoriation of the third kind, from neglect on the part of the patient before admission into hospital, became converted in the space of three or four days into the phagedænic ulcer of Mr. Carmichael. This mode of origin we have frequently observed in both sexes, particularly in chancres behind the glans. In the third place, chancres formed in the mucous follicles of the inside of the nymphæ, the openings of which are very distinct, particularly in young females. These small follicles inflamed, suppurated, and when the openings closed, and the pus went deeper, formed abscesses. When the matter was discharged externally (a much more frequent occurrence), either by the pus escaping through the natural opening, or by the breaking of the abscess, chancres were formed, most commonly of the second species. In this manner fistulous and chancrous ulcers formed, which, on account of their minute size and concealed situation, repeatedly escaped an unpractised eye. We frequently found ulcers on one and the same spot in prostitutes, and this spot proved to be the seat of a fistulous follicle: when this was destroyed with caustic, the tendency to have chancres on one and the same spot ceased. These fistulous ulcers looked like a small, thin, dark-red follicle, darker than the surrounding healthy membrane, with a small opening in the centre, permitting the escape of a small quantity of pus on pressure, and with their edges inverted. This origin of chancres was extremely frequent among females; on the other hand, we have seen only a few examples of it among males, on the inner lamella of the prepuce. These mucous follicles often closed, and seemed to be healed up, but always broke out again in a short time.

"Chancres of the fifth species, in cases where we had an opportunity of observing their mode of origin, formed from semiglobular condylomata, which having first secreted a fluid, and afterwards been exposed to friction, gave rise to excoriations.

"On the origin of the sixth species we had no opportunity of making any observations. Hemorrhoidal chancres formed where hemorrhoidal tumors were exposed to friction, and to the contact of leucorrhœal or gonorrhœal matter.

"Chancres of the first four species in women were most commonly situated on the fossa navicularis, the remains of the hymen, the internal walls of the nymphæ, in the angles between the nymphæ and carunculæ myrtiformes, and on the anterior edge of the labia; less frequently in the urethra, and around it, in the angles between the labia and nymphæ, on the outer surface of the nymphæ, and on the frænum itself; more rarely still in the space between the urethra and vagina, or between the urethra and the clitoris, on the outer surface of the labia, or in the vagina. In the latter case, we always observed a smaller or greater protrusion of the walls of the vagina, on which a chancre of small size was discovered. Chancres on the anus (which were observed only in a few cases) were the result of unnatural coition.

"In men chancres were situated on the glans, behind the corona glandis on the frænum, on the inner surface of the prepuce, in the urethra, and at the junction of the external with the internal lamella of the prepuce; less frequently on the outer lamella of the prepuce, on the dorsum or under surface of the penis, and on the scrotum; still more rarely on the perineum, anus, pubis, and inside of the thigh; the latter from contact with the organs of generation.

"Chancres of the fifth species were situated in women on the labia, the outer surface of the nymphæ, the inner and upper part of the thigh, and frequently on the perineum; in men on the scrotum and penis, particularly the under surface, the perineum, and the upper and inner part of the thigh. All ulcers occurring on the scrotum exhibit this form.

"Spongy chancres (sixth species) were seated on the inner lamella of the prepuce, and sometimes in the angle between the prepuce and glans.

"Hemorrhoidal chancres, of course, were naturally seated on the circumference of the anus.

"With respect to the prognosis of chancres, we were always able to make it invariably good. None of the different species extended to any remarkable degree either in depth or circumference, when once submitted to treatment. Even phagedænic chancres, which had in many cases committed great ravages before the patient's admission, healed in such a manner that a considerable portion of the devastation was repaired by healthy granulations. In one case only, a large portion of the glans, which had been lost before admission, was never reproduced. All the ulcers healed, and all the cicatrices were firm and good. With respect to each individual species, the following was our experience.

"1. On the whole, chancres of the first species healed in the shortest space of time. Those of the second and third healed more slowly; those of the fourth most slowly. The spongy chancre (6th species) occupied an intermediate rank; the condylomatous (5th species) and the hemorrhoidal chancre (7th species) were often extremely obstinate.

"2. Hunterian chancres, so small as to measure only a line in diameter, were (proportionally to their small size) extremely slow in healing.

"3. Chancres around the orifice of the prepuce, on the scrotum and perineum, were generally slow in healing; those behind the corona glandis, on the glans, and on the labia, required for the most part but a short time for their cure. Ulcers on the frænum in males were very slow in cicatrizing.

"4. Chancres produced and kept up by a mucous follicle usually did not heal until the follicle was destroyed.

"5. Chancres healed in the best and speediest manner with patients who had used nothing for the disease before admission; they were most obstinate in patients of a scorbutic, scrofulous, or phthisical habit.

"6. Chancres with a brownish base were generally tedious.

"7. Some chancres proved remarkably obstinate, without any sufficient cause that we could discover.

"8. Chancres made by art required the same time for their cure as Hunterian chancres of similar size."

As to treatment, the following details exhibit the course pursued:—

:ases where chancres were seated in the folds of the generation, as, for instance, between the labia and ıe latter and the carunculæ myrtiformes, &c., the lips :ated, the angles cleaned, frequently washed, and h charpie dipped in water or saturnine lotion, and the newed two or three times a day. If the ulcer sup- ely, the dressing was used oftener. If there was in the healing process, the lotions were changed, and aqua phagedænica nigra, a solution of four grains of zinc in eight ounces of water, decoction of elm bark, le of the oxide of zinc in eight ounces of saturnine) then employed: or recourse was had to ointments, used chiefly in cases where the chancres had become , and suppurated sparingly. Zinc ointment, or the vas in general preferred:—

"℞. Unguenti Zinci, ℥ss.
Balsami Peruviani, ʒj.
Potassæ fusæ, ℈j.
Misce; et signetur—the black ointment.

vas found extremely serviceable in cases where the ıealed up to a certain point, but would not cicatrize. ənt was allowed to remain unchanged for two or three it was thrown off by pus, or with a scab. If the new ited any roughness or chafing, so as to threaten to become raw again, we were in the habit of smearing it intment for several days successively.

əs of ulcers with a copper-coloured base, marsh-mallow lid more service than anything else. Often we were try many ointments before we could hit on a good

the healing process was advancing, pencilling the ıe sore with a weak solution of caustic potash greatly liminution of the chancre.

lomatous (5th species) were treated, in the commence- ;ly by frequent ablution with soap and warm water, applying pledgets dipped in saturnine lotion. After)ecame drier, the central portion of the base became .nd the edges began to approximate and unite. The .ar elevations also diminished, but they were rarely removed by these means alone. They were then pencilled over with Plenk's liniment, according to the following recipe:—

"℞. Corrosivi Sublimati,
Camphoræ, ăă, gr. xij.
Aluminis.
Acetatis Plumbi, ăă, ℈j, misce terendo, et adde
Acidi Acetici, fʒij, ut fiat solutio; dein adde
Ætheris Sulphurici, f℥j.
Signetur 'Plenk's Liniment.'

"When the elevations had been pencilled for a few days with the white sediment of this liniment, they began to exfoliate, shrink, and diminish in size. If they resisted this application, they were touched for several days in succession with fuming nitric acid, or cut off with the scissors. This kind of ulcer, however, was very apt to return again where attention to cleanliness was omitted.

"The spongy ulcer (6th species) was covered with charpie dipped in the following lotion:—

"℞. Aluminis,
Cupri Sulphatis, ăă, ℥ss.
Aquæ, f℥xij.: Misce.
Signetur 'The green lotion.'

"If this happened to be too strong, the decoction of elm bark was substituted. The ulcers were treated in this way until the base became reduced to the level of the skin, a small palish blue film surrounded it, and the raw surface in this way diminished in size.

"Hemorrhoidal chancres were also treated with saturnine lotion; in many instances hard hemorrhoidal tumors were cut off with a scissors.

"On many occasions we have attempted to destroy with caustic the small vesicles from which chancres often arise, in order to prevent the formation of chancres; but a much larger sore was produced in this way than if they had been allowed to run their course as usual. Sometimes, however, we succeeded in preventing them from passing into chancres by smearing them with zinc ointment as soon as ever they were observed on the glans. Under this treatment, they sometimes dried up without forming sores.

sms were very often employed; under the following es they were very efficacious:—1st. Where the edges were very hard, callous, and averted. 2nd. Chancres ently heal up to the size of a millet-seed, and then tionary, or even get worse, from the formation of under the edges. In such cases we applied charpie lecoction of elm bark over the ulcer, and over the ultice. These measures in general answered our 3. 3rd. When the base was covered with a firm, coloured layer. 4th. Fistulous ulcers of the mucous e often healed up completely with cataplasms. 5th. und them extremely serviceable in softening hard, l chapped cicatrices. Finally, when cicatrices broke few days after healing, we applied cataplasms either y over the raw surface itself, or previously touched intment, black salve, or the lotions above mentioned. served that the first four species of chancres were in healing to pass through the four stages already in succession. Often a phagedænic chancre, after ur, and sometimes after eight or ten days, began to character, the edges became softer, flatter, less nd less averted, and the surrounding inflammation milder aspect. The ash-coloured layer which formed ecame thinner, the gangrenous parts were detached, lities of the base disappeared, and new red and anulations sprang up among the ash-coloured spots ied the base. The edge then sank on one side (rarely t spots simultaneously), the base became elevated in direction, suppuration went on healthily, and small ll-defined patches of epidermis became visible on the the ulcer. The remaining edges sank down in a y, the base became elevated, the small cicatrized roximated, and the ulcer completely healed.

y large, deep phagedænic ulcer, with or without required from four to six or eight weeks, and some-e, to heal.

"ON THE PREDISPOSITION TO CHANCRE.

ave often been able to verify the observation, that , and young women especially, are extremely liable to venereal infection, and in particular to the formation of chancres. The following are the results of our experience on this point:—

"1. All young women not attentive to due cleanliness were very easily infected. We have seen this observation confirmed in numberless instances. From some brothels young women, labouring under syphilis and particularly under chancre, were sent to us much more frequently than from others; from the former the greater number of patients admitted were affected with itch, and much less cleanliness observed than in the others.

"2. Young women with very narrow vaginæ were very readily attacked with excoriations of the nymphæ, the carunculæ myrtiformes, and fossa navicularis, which subsequently became chancres. Whenever we meet with this state, we endeavour to dilate the vagina with bougies gradually and cautiously employed.

"3. The shorter the period elapsed since defloration, the more readily did chancres and excoriations form; since prostitutes who had been a long time on the town were much seldomer infected.

"4. Young women of scrofulous habit, or very delicate skin, were very apt to get chancres.

"5. But, above all, those who had the mucous follicles of the vagina highly developed were peculiarly liable to the formation of chancres or abscesses. The mouths of these follicles, particularly in young women of full habit, may be seen very distinctly on the inner surface of the nymphæ. They are sometimes so large as to admit the end of a probe with ease. When inflamed, the parts around are of a darker colour, and the mouth of the follicles somewhat elevated. As we have already stated, they become very readily converted into abscesses, but more frequently into chancres. Sometimes, on dismissing a female patient, we have been able to determine beforehand the spot on which a chancre would be found on the next infection, viz., the situation of a mucous follicle with a large opening. Hence we have often thought it necessary to make an incision through the follicle, and then burn it out completely with caustic potash; after which we never found a chancre to form on the same spot."

Condylomata, which are so rarely seen in this country (at least, in proportion to the other forms of primary syphilis), constitute one of the most common forms of the disease in Germany, and are looked upon as extremely obstinate, slow in healing, and very apt to return. Six different species have been observed by Dr. Fricke.

"1. Conical condylomata.—These resemble grains of peeled barley, of a whitish colour, aggregated, and more commonly observed in females. Their situation was on the inside of the nymphæ, between the nymphæ and labia in the vagina, behind the corona glandis, and on the inside of the prepuce. They required excision and cauterization, and were very apt to return: they sometimes appeared spontaneously during the period of the catamenia.

"2. Scollop-shaped condylomata.—These sometimes resembled a cockscomb in shape, sometimes they were more like a strawberry or a cauliflower, but the original form was that of a scollop or cockscomb. They grew to the height of half or three-quarters of an inch in some instances. When small, they were generally of a white colour, and covered with a whitish exudation. They were of a delicate texture, hollow, and when tied, appeared full of bright red blood. When cauterized superficially, they increased in size, and became indurated on the surface; they were in general aggregated, and occurred more frequently in men than in women. Their situation was for the most part the same as that of the foregoing. Sometimes they projected from the urethra, and were occasionally found in the vagina. They required excision and full cauterization, but often disappeared of themselves, or under very simple treatment. They were treated with caustic potash, Plenk's liniment, calomel, and powdered savine, a solution of corrosive sublimate (gr. i. ad ℥j.), and excision.

"3. Polypoid condylomata.—These were fleshy, roundish, soft, and somewhat redder than the mucous membrane of the vagina. The base was as broad as the summit; they were seldom observed, occurred only in females, and on the perineum, between the labia and nymphæ, and on the clitoris. When removed by excision, and cauterized, they seldom returned.

"4. Urethral condylomata.—These were observed in females at the opening of the urethra, and differed but little from the polypoid condylomata. They were sometimes cured by excision and cauterization; sometimes they were so obstinate that it was found useless to apply any remedies. Several prostitutes were known to have them for a considerable time, and follow their avocation without injury to others.

" 5. Semiglobular condylomata.—These were seated on the skin, with a broad surface, and varied from the size of a split pea to that of half a musket ball. They were pale or whitish, covered with moisture, somewhat excoriated, and became converted by neglect into condylomatous chancres. They were generally situated in the vicinity of, but not on, the mucous membrane of the organs of generation. They were extremely infectious, and readily gave rise to similar condylomata or chancres on the parts with which they lay in contact. Their treatment was very simple; cleanliness and isolation were the only requisites. When reduced to a certain size by the use of simple astringent washes, they were completely removed by caustic applications.

" 6. Quadrangular condylomata.—These were seldom observed, were more common among males than females, and were always situated round the anus. Their form was square or trapezoid, compressed on the surface, lying close together, and separated by fissures, from which a considerable quantity of moisture exuded. They were somewhat paler than the epidermis, and in some cases seemed to have owed their origin to old indurated hemorrhoids. They required more active treatment than the foregoing, and were slower in disappearing.

" Condylomata of all kinds, occurring in pregnant women, were treated with caution, and excision or cauterization was seldom employed.

" VENEREAL SORE THROAT.

" (*Chancres in the throat—Chanker im halse*).

" Venereal sore throat appeared in the form of ulcers of the tonsils, the arches of the palate, the uvula, the soft palate, or the posterior wall of the pharynx.

" With respect to their origin and course, ulcers of the tonsils exhibited the three following forms :—

" In the first form the tonsils swelled, and acquired a deeper red colour, produced slight pain in swallowing, either at the commencement or subsequently, and gave a kind of nasal tone to the speech. The tonsils then increased in circumference and depth, and exhibited on the surface white purulent vesicles, which burst, became gradually deeper, and formed ulcers, which at first had nothing characteristic, but by neglect became greatly enlarged, and assumed an ash-coloured appearance; when the tonsils happened to be greatly enlarged and swollen, the base of the ulcer appeared hollow; the edges were sharp, corroded, and everted. The base was often of a greenish colour, and the circumference inflamed. In this way these ulcers would pass through the four first stages of ulcers on the genitals, with this exception, that they never became truly phagedænic. When the ulcers went on unchecked, they became larger, and involved the neighbouring parts (this, however, rarely occurred), or new ulcers formed in the vicinity, and coalesced with the latter. The healing process went on as in the case of ulcers of the genitals, with this exception, that it was often difficult to determine with precision whether the tonsilar ulcer was really healed or not, because the cicatrices looked deep and angular at first, or even for a considerable time, and were often covered with whitish streaks, which might be easily mistaken for ash-coloured ulcers.

"Ulcers of this form appeared almost as frequently after the mercurial as the non-mercurial treatment, and were generally observed in men of robust habit. They healed slowly, and were very apt to return.

"The second species of ulcers of the tonsils formed without tumefaction or inflammation. The first appearance was a broad patch of excoriation, the base of which exhibited nothing like excavation, but on the contrary was often elevated. It was either not at all or very slightly ash-coloured, the edges indistinctly cut. This excoriation extended over the whole tonsil, and had this peculiarity, that it very seldom affected the voice, and only in a very slight degree. Ulcers of this description were most common after the non-mercurial treatment. They were cured easily and rapidly, and often healed spontaneously.

"In the third species of ulcer the tonsils swelled greatly, but were neither inflamed, painful, nor altered in colour. Circular excavations formed, secreting a muco-purulent fluid, and of which it was impossible to say with certainty whether they were real ulcers or the mouths of the enlarged mucous follicles. These swellings affected deglutition, but did not in general interfere with speech; they appeared most frequently after the mercurial treatment, did not get worse, and when they had attained to a certain height, generally resisted all applications, so as frequently to require excision. Enlargements of the tonsil, without any ulcer-like cavities, were not unfrequently observed; these either formed of themselves, or remained after the healing of ulcers of the third species, and often required excision.

"Ulcers of the arches of the palate and uvula were frequently observed. They were always ash-coloured, surrounded by an inflammatory border, interfered greatly with speech, and generally appeared after the mercurial treatment, but were not refractory to treatment.

"Ulcers on the soft palate commenced in the form of vesicles situated on an inflamed base, containing the first day a transparent fluid, which became thicker on the third and fourth day, when the vesicles burst, and became converted into a Hunterian chancre. Frequently a number of them formed simultaneously, increased in size, coalesced, and in this way gave rise to ulcers of very considerable size.

"Ulcers on the posterior wall of the pharynx had always an ash-coloured base, altered the speech greatly, were in general covered with a viscid greenish mucus, a portion of which flowed down when the mouth was opened, so as to render it a matter of difficulty to recognize them. Ulcers of this kind always appeared after long mercurial courses, and healed very slowly, but with certainty."

Syphilitic eruptions were found by Dr. Fricke so various and complicated as to render their classification a matter of difficulty. Most of them, however, exhibited in general the characters of one of the following classes:—

"1. Pimples, at first discrete, of a bright liver colour, on a level with the skin in the commencement, but afterwards somewhat raised and indurated; they appear first on the forehead, and then on the breast and back, but rarely on the extremities; they were not in general covered with scales, or surrounded with an inflamed areola; often formed small purulent vesicles, and rarely exceeded in size the head of a large pin. They generally appeared after non-mercurial treatment, and disappeared quickly and completely.

"2. Brown spots, at first light, but afterwards darker, and of a copper hue, from two to six lines in diameter; roundish or angular, raised somewhat above the skin, flattened, shining, and covered with scaly laminæ. They appeared at first on the back, breast, and nape of the neck; then on the arm and fore-arm; and afterwards extending over the face, forehead, scalp, and lower extremities, so as to give the patient a mottled appearance. When the disease went on unchecked, the spots increased in size, became harder and more elevated, engaged the skin more deeply, and when neglected passed into ulcers, or into the following class. This form of eruption was generally seen on patients who had taken mercury for the primary disease.

"3. Very large purple spots, from one to two inches in diameter, or more, somewhat indurated, with outlines imperfectly circular, in consequence of their angular projections, generally single, seated on the extremities and shoulders, raised above the surrounding skin, partly raw, partly covered with crusts, and frequently changing into deep ulcers. They often appeared with the colour above mentioned, or formed small, hard, deep-seated purple spots, which increased in size, and sometimes were formed from spots of the second description. They never appeared on the face, but always on the shoulders, and on the upper and lower extremities, were extremely obstinate, and always left behind them a discolouration of the skin. This form of eruption was observed only in cases where large quantities of mercury had been used.

"The second and third forms were the only ones that ended in ulceration. These ulcers were of various kinds, but in general were characterized by an unequal base, imperfect granulation, corroded edges, and an inflamed areola. A third form of ulceration was also frequently observed; this was the result of chronic abscesses, and generally occurred in syphilitic cases of long standing.

"TREATMENT OF SYPHILITIC ERUPTIONS.

"The treatment was extremely simple. It commenced always with ablutions with soap and warm water, and the purging mixture of Epsom salts; by these means alone the eruption No. 1 was generally cured. In cases of the eruption No. 2, after a few days we proceeded to the use of nitric acid baths (from one to two ounces of the acid to each bath), along with the internal use of the decoction of the woods, to the extent of eight or twelve ounces in the day. The diet was at first low, but was afterwards gradually improved. During the first period the patients were confined to bed; but when the eruptions became milder, they were allowed to walk about their rooms. When the spots became pale, the skin smooth, and the face and forehead clean, exercise in the open air was regarded as a means calculated to complete the cure. The spots on the face were moistened frequently in the day with a solution of corrosive sublimate (twelve grains to twelve ounces of water), or of nitric acid (a scruple to twelve ounces of water), and in milder cases disappeared so much in the course of four weeks as to allow the patients to take exercise in the open air.

"The spots described as No. 3 came much less frequently under our notice, but they were of the most obstinate description and were very slow in disappearing. In some cases, after employing the foregoing and other external remedies in vain, we have derived remarkable benefit from covering each individual spot with small blisters. As soon as the blister rose, and a raw surface formed, marsh-mallow or zinc ointment was applied, and cicatrization promoted as speedily as possible. After this application the spots became much paler, smoother, and more like the sound skin; they also became less prominent, and exhibited fewer raw patches.

"In general, we considered the use of baths as the most valuable means of cure in syphilitic eruptions. The following were those chiefly employed.

"Fresh-water baths were used as well in the commencement of the cure, with the view of trying their effects on the eruption, as also at a later period, for the sake of cleanliness, particularly where there was a copious detachment of scurf. Soap baths (in the proportion of a pound of yellow soap to each bath) always constituted the first step of treatment in every form of eruption. Partly, we were able to draw a tolerably fair conclusion from their influence on the eruption, as to the quickness or brevity of its course; and partly they were found sufficient in many cases to effect a cure without any other remedy. From six to eight baths were in general found sufficient for the removal of the eruption marked No. 1, and from twelve to sixteen for that of some others resembling No. 2; in the commencement, at least, they exerted a favourable influence over all. Saline baths (composed of two pounds of common salt to each bath) were used only on a few occasions, and without any remarkable effects.

"Vitriolated zinc baths (consisting of two ounces of sulphate zinc to each bath) were prescribed with good effects in the iption marked No. 2, but were very seldom employed. Of tric acid baths we have already spoken.

"Sulphuric acid baths (consisting of two ounces of the strong id to each bath) exerted a favourable influence on the erupns.

"Corrosive sublimate baths (half an ounce of the sublimate each bath) were often employed, and were of great service, rticularly when preceded by soap and nitric acid baths. They med to remove the eruption more speedily than even the nitric d baths. In the eruption marked No. 3 they did not answer r expectations.

"Bran baths operated with remarkably good effects in the iption marked No. 1; they also rendered the third description lder, and thereby contributed to diminish it.

"During the year 1827 the venereal patients took on the ole 14 saline baths, 38 zinc baths, 103 bran baths, 302 subiate baths, 314 nitric acid baths, and 330 soap baths.

"AFFECTIONS OF THE BONES.

"*Caries of the bones* was never seen in any case which had en treated without mercury throughout; the bones which were st frequently attacked with caries were the nasal, palatine, xillary, sternal, and tibial.

"*Pains of the bones* were of various kinds. The following ieties were those chiefly observed:—

"1st. Fixed pains in the centre of the bones. These were nerally felt in the bones of the shoulder, forehead, and forearm, t chiefly in the tibia. The pain was dreadful; increased by e heat of the bed at night, and by the slightest touch, it in neral deprived the patient of all sleep, and was accompanied by dular swelling, which sometimes terminated in abscess and ies.

"2nd. Fixed pains in the ends of the bones. Sharp, lancinting pains were felt most frequently in the knee, ankle, and oulder-joints, more rarely in the hip, elbow, and wrist-joints. iese were sometimes slight, sometimes intense, and of an lammatory character. They were aggravated by cold, great heat, pressure, and on the approach of night; but relieved by warmth and moisture, particularly the latter, which produced local perspiration. They were frequently combined with anasarcous swellings of the parts, and, when neglected, sometimes terminated in effusions of water or pus into the synovial membrane of the joints.

"3. *Fixed pains in tendinous parts.*—Tense lancinating pains were felt in the tendinous expansions and ends of the muscles, particularly those of the head, nape, back, and shoulders; sometimes, but not always, increased by pressure, relieved by warmth and moisture, and exasperated by cold, particularly cold draughts of air. They resembled rheumatic pains, were extremely obstinate and harassing, and sometimes ended in partial paralysis.

"4. *Flying pains.*—These were felt in various parts of the body, in the head, the joints, arms, femur, and tibia, and generally appeared where the patient had been exposed to cold after mercurial frictions. They sometimes disappeared of themselves, and sometimes became fixed, but seldom harassed the patient so much as the foregoing species.

"The treatment of the first species of pains was much easier than that of the second or third. In the first species the only thing which was found to be productive of certain and permanent relief was to make an incision over the painful part down to the bone. As soon as this was done, and a poultice applied, the pain ceased, and never returned. The incisions varied from one to two inches in length. The periosteum and bone were in general swollen, and the latter was often found carious, or covered with sanious pus. Leeches, cataplasms, and alkaline baths were of little use, except at the commencement, or in very slight cases. Pains of this description generally came on after the use of mercury, but were also observed in two instances at the termination of gastro-rheumatic and rheumato-nervous fever. Pains of the second description were treated antiphlogistically. When of an inflammatory character, leeches, cataplasms, rest, and the free use of opium at night in general proved successful. Warm or sulphur baths were frequently given, and the patient took nitre or the acids by day. Pains of the third kind were treated with alkaline or sulphur baths, tartar emetic ointment, warm clothing, frictions, and, when on the decline, exercise in the open air, and cautious use of the cold bath. Flying pains generally yielded o warm baths, but sometimes required the line of treatment pplied to pains of the third species.

"Iritis and alopœcia were observed only in a few cases, and nvariably in patients who had been treated with mercury."

LECTURE LXIV.

SYPHILIS CONTINUED.—ITS PATHOLOGY AND TREATMENT.

In my last lecture I drew your attention to the conclusions at which Dr. Fricke had arrived when he published his *Surgical Annals* in 1828.

As ten years have since elapsed,* during which Dr. Fricke has continued to conduct the treatment of the venereal patients in the Hamburgh hospital, I took the liberty of writing to him, for the purpose of ascertaining whether subsequent experience had induced him to alter his views. His answer was that, instead of altering his views, experience had confirmed them. Dr. Fricke, at the instance of Dr. Oppenheim, had the kindness to discuss some of the most important topics connected with syphilis, in the presence of a well-informed and intelligent young surgeon, a friend of Dr. Oppenheim, who took notes of what Dr. Fricke said, and transmitted them to Dublin for my use. These notes I now proceed to lay before you; and, in doing so, I beg leave to observe emphatically, that Dr. Fricke cannot be held responsible for them, inasmuch as though I believe them to be in every respect accurately taken, yet allowance must be made both for misconception of Dr. Fricke's meaning on the part of the gentleman who took the notes, and of errors on the part of the translator. The latter I have endeavoured, if possible, to avoid; for the translation, made originally by Dr. West, has been since carefully revised by Mr. Swift and myself, and I think, therefore, I can answer for its fidelity.

It is scarcely necessary to add how much I feel obliged to Dr. Fricke for the readiness with which he complied with my request, and the trouble he has taken to fulfil my wishes. The great hospital of Hamburgh, under his care, affords one of the best schools for medicine and surgery with which I am acquainted, and affords the best opportunity for the study of venereal com-ints. In truth, I strongly advise students who wish to ain a knowledge of Continental practice to go to Hamburgh the first instance. Half a year, or a year, spent in that city, l afford them more chance of obtaining sound practical ormation, than if they had repaired to Paris or Berlin.

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* This lecture was delivered in 1838.

Among the German writers who have contributed to advance rational treatment of syphilis, Dr. Oppenheim has men- ned Brunninghausen of Wurzburg, Pokkels of Brunswick, n Walther of Bonn, and more particularly Fricke of Ham- rgh,* who published several papers on the subject in *Rust's agazine* for 1826 and 1831, and in *Casper's Wochenschrift* for 34.

Subsequently, Dr. Fricke communicated, in his *Surgical nals* for 1828, his very important observations on the rational atment of the disease, which I have already brought before you. Handschuh (*On the Forms of Syphilis and their Treatment,* unich, 1831), who has given an elaborate and critical history the pathology, prophylaxis, and treatment of syphilis, with view to the more extensive diffusion of a harmless system of atment (a task subsequently executed with more accuracy by norden), often refers to these observations of Dr. Fricke, and tempts also to prove that under the name of syphilis are com- ised a number of diseases which have probably no mutual lation, and in the treatment of which mercury is usually em- oyed. Even at the present day, German practitioners in neral repose the highest confidence in mercury. No one pears to concern himself about its *modus operandi*, or why it ould be preferred to all other remedies in the treatment of philis, every one pursuing with respect to it the same reason- g in a circle as with respect to Peruvian bark. Bark cures termittent fever, but intermittent fever cannot always be cured ith bark.

Dr. Fricke, however, has had no reason to abandon his new ethod of treatment; on the contrary, further experience has t only confirmed his previous observations in every in- ance, but also a series of cases, now amounting to several thousands, has forced upon him the conviction *of the superior efficacy of what has been termed (but incorrectly) the antiphlogistic method*, and at the same time has led him to new views with respect to the nature of syphilis, a disease exceedingly complicated in itself, and rendered still more obscure by the hypotheses put forward with respect to it, some with more, others with less foundation. As the result of his investigations it may be stated:—

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* Dr. Oppenheim himself has indirectly, but powerfully, assailed the mercurial atment in his work, *Behandlung der Lustseuche onhe Quecksilber*, Hamburgh, ffman and Campe, 1837; which contains an erudite and accurate list of all the nedies which up to that time had been successively employed in the treatment of philis.

That syphilis has two constituents, namely, *contagion* (a source to which attention has been almost exclusively directed) and *disposition*, an agent of equal importance, at least so far as the origin, reproduction, and treatment of the disease is concerned. To this result of his I shall now proceed to call your attention; and first as regards contagion. First. Numerous experiments in which the pus of chancre was mixed with mineral poisons (as, for instance, chlorine, corrosive sublimate, arsenic, &c.), or with vegetables (as cicuta, belladonna), or with the matter of itch or small-pox, have invariably afforded the same result, viz., the production of genuine chancre. Hence we may conclude that contagion is something extremely subtile, and capable of maintaining its own vitality, and consequently that it must be very difficult to invent a preventive against it. Even the application of ice or heat to the inoculated spot fails in arresting the development of chancre.*

Secondly. The syphilitic, like all other contagions, has a tendency, when its course is not disturbed, to develop itself on the membranous tissues, particularly on the confines of tissues of different kinds, as for instance on the prepuce (the normal secretion of which allows us to class it as intermediate between skin and mucous membrane), around the anus, at the terminations of the intestinal and bronchial membranes, and on the conjunctiva, a membrane which holds an intermediate rank between the mucous and serous. The most obstinate form, condyloma, generally selects such transition spots or intermediate tissues. The history of contagion informs us, that in prevalent and severe cutaneous affections it is the result of contact between individuals in different states; and the practice of medicine teaches us that attention to the skin, or, in other words, cleanliness, is beyond doubt one of the most efficient remedial agents, and its observance a main condition of cure. Mercury, with its pseudo-syphilitic cutaneous affections, as well as all other anti-syphilitic remedies in repute, promotes or produces directly an excitement of cutaneous activity. Nodes, independently of being the reflex action of the disease on the periosteum (a membrane which belongs rather to the secreting than the dry fibrous tissues), form no argument against this position.

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* Eisenmann asserts on some occasions, but erroneously, that the admixture of corrosive sublimate destroys the syphilitic virus. Fire certainly destroys it, but still it is not an anti-syphilitic.

Thirdly. True crises are scarcely to be expected or observed in chronic diseases of the skin. We should, however, always bear in mind, that the constitution requires a certain degree of power to react against contagion, and resist the morbid process which the latter endeavours to establish; and that this power is least of all to be interfered with where the existence of a morbid predisposition, but more particularly of the scrofulous diathesis, is likely to destroy its true balance. In such cases mercury is positively injurious.

Fourthly. The contagion of syphilis seems to possess a certain degree of protective power against the same disease. Thus, if an infected person be inoculated with the virus, he is much less likely to take the disease than a healthy, uninfected person. In this, however, the local and general condition of the system which occurs during coitus, and strongly disposes to the reception of contagion, plays an important part. If, however, a person affected with chancre were inoculated with the matter of that chancre on a fresh spot, and from this on a third, and so on, it will be found that this process can be repeated only a few times with success. The individual becomes, as it were, habituated to the virus, and less susceptible of its influence. In the same way, no secondary affections are capable of being propagated by inoculation. May we not, then, look upon these affections as a salutary effort of nature to check the progress of the disease? The relative immunity, too, enjoyed by some females, seems to depend upon the constitution being, as it were, stimulated to reaction and spontaneous cure by a second contagion. In persons of this kind, an inveterate lues, that is, a modification of their whole organic system by the syphilitic contagion, may exist for a long time without offering a single point of attack for therapeutical agency. Even connexion with such individuals, provided they are free from local sores, is not dangerous to others.

Fifthly. How long the period of incubation of the contagion may last is not determined. There are cases in which a connected series of symptoms of alternate improvement and aggravation points out the struggle of the constitution against the contagion, the latter ultimately gaining the ascendancy, and exhibiting itself more and more in fresh secondary affections. Often, however, these affections, breaking out after a number of years, are not of a truly syphilitic character, but the result of a cachexy produced in a system already undermined by previous attacks of syphilis, and by a variety of noxious influences which develop morbid diatheses, or bring into play acquired predispositions. Hence, in all localities favouring the production of cachexies, we find peculiar forms of disease which we are forced to look upon as syphiloid, inasmuch as they present the same modified forms as scrofulous and impetiginous disease in which syphilis is known to have the initiative—a property shared by it in common with measles, small-pox, and all other contagious affections. In such a case as this, to attribute the whole series of morbid pheuomena to the previous syphilis would be as incorrect as to regard growth as the sole cause of phthisis. Growth merely develops an original disposition, viz., the phthisical; and we have only to suppose that the disease existed in a latent form to avoid all error on the subject.

Sixthly. The original seat of contagion is either the mucous membrane of the genital organs and its mucous follicles, or the chancrous, *i.e.*, a portion of external skin brought into the condition of a mucous membrane.

Seventhly. No advantage to the treatment of syphilis results from making distinctions between its primary forms, and particularly between gonorrhœa and the syphilitic virus. They all get well under the (so-termed) antiphlogistic treatment. The mucous membrane of the male genitals, which occasionally becomes violently inflamed, and secretes copiously and obstinately from the mere introduction of bougies, or the matter of non-syphilitic blepharophthalmia, is irritated by the syphilitic virus just as it is by these foreign chemical or mechanical influences. Gonorrhœa, however, for the most part has its origin in other morbid sources (leucorrhœa, the period of mentruation, before and after the same, &c.) which are modified olely by coitus, by it produces a noxious effect on the system, and without it are to be looked upon as harmless. We have not hitherto been able to tell by the appearance of the discharge from what source it arose. The conjunctiva is much more frequently observed in a purely inflammatory state than the mucous membrane of the urethra.

Eighthly. Sometimes, but very rarely, we observe a transition from gonorrhœa to chancre. In 200 cases in which inoculation with gonorrhœal matter was performed, there were only two instances of chancrous sores as the result. A greenish yellow discharge from the uterus produced by inoculation genuine chancre, and gave rise to gonorrhœa when introduced into the male urethra by means of a fine bougie.

Ninthly. The importance of bearing in mind the disposition is still further shown by Richter's supposition of the existence of a gonorrhœal lues, and Autenrieth's of a gonorrhœal scrofula. Every disease affecting the whole system, and syphilis and gonorrhœa among the rest, is capable of awakening dormant predispositions; hence, syphilis or gonorrhœa may give rise to tumors of the joints and nodes in persons of a rachitic or rheumatic constitution. The sympathy between the kidneys and urethra is remarkable in one point of view, namely, *that in gonorrhœa the urine is found to contain a large quantity of albumen.* What the consequences may be of the removal of so much albumen from the system, whether it be a species of natural antiphlogistic, or whether chemical analysis can prove he existence of a deficiency of albumen in the blood, is not yet etermined; it is a condition, however, which has been observed n connexion with many forms of cachexy. The mental impression caused by gonorrhœa—the almost incurable hypochonria syphilitica—indicates some important alteration in the dmixture of the fluids. The interesting observations of Gutterock, Wood, Vögel, and Henle, on mucus and pus, establish for ucus (inasmuch as it is now to be distinguished from pus) high rank among the organized fluids; and, in fact, the albuen ovi, which bears an analogy to the mucus of the genitals of e mammiferæ, is a species of pus or mucus secreted by the viduct, and of great importance in the generation of the bird.

And now as regards disposition:—The state of the system, and in particular of the cutaneous tissue, is deserving of consideration, not only during coitus, but also during the whole course of the disease. Many persons do not take the disease either by coition or by inoculation, and, in general, persons in a tranquil healthy state do not receive the contagion even when the virus is brought into contact with abraded surfaces. Dr. Fricke, on one occasion, while examining a gonorrhœal patient, had the whole contents of an urethral lacuna squirted into his eye; simple ablution of the part prevented all bad consequences.

The delicate skin of fair persons, and that of the negro, favour the reception and spread of contagion; the same is the case with persons of a dirty, greasy skin, or where the functions of the skin have been injured by an unquiet life, or by change of climate. Hence, the inhabitants of northern climates, who in general seem to exercise a stronger reaction against contagion, suffer much more when they visit more southern regions. Hence, also, the rich suffer less than the poor. Persons of a sanguine temperament are in general the most susceptible; the whole system in such persons, and the mucous membrane in particular being in a state of excitement. France would suffer less from this disease, were it not for the slight attention paid to the skin, and the use of mercury.

The scrofulous and rachitic, the rheumatic and gouty diatheses, the predisposition to lupus and herpes, have alike an influence in determining the form of what has been termed secondary syphilis. As there exists in some individuals a complicated predisposition to sore throat, probably depending on a scrofulous diathesis, the predominance of the mucous tissues, and gastricism, the eruption of ulcers of the throat may be apprehended under the following circumstances:—The throat is narrow, the tongue arched, and with difficulty pressed down in the mouth; the back of the throat cannot be seen without exciting nausea; the mucous membrane secretes copiously, and is covered with moisture; the soft palate is of a more or less deep red colour; the arches of the palate hang very low down; the glosso-palatine higher than the pharyngo-palatine; the uvula, which in the normal condition has only a red stripe down its centre, is of a uniform red colour, covered with mucus, and adheres readily to either of the tonsils; the latter stand near each other, are red, and covered with a viscid mucus; the whole mucous membrane the throat is very sensitive, secretes more copiously when e mouth is kept open, and becomes redder, as if new vessels came suddenly developed in it. Under such circumstances may naturally expect ulcers in the throat; under opposite nditions we look for them in vain. Sometimes the mucous embrane of the posterior nares becomes indurated, applies self to the tonsils, and produces excoriations, which, however, al under the use of emollient injections. The occurrence of esh catarrhal and gastric derangements seems to have a conderable influence in bringing about all syphilitic metastases, at least directs the force of the morbific process to parts ready weakened and predisposed. The predisposition to boes depends upon other causes as well as scrofula; among ese we may mention much walking or bodily exertion. omen are more liable to these glandular affections than en; persons of spare habit and firm fibre, as also persons bouring under hernia, in whom the parts are subject to conant pressure from a truss, seldom suffer from them unless ey happen to be in a highly cachectic condition. Not unlike bo in many respects is the disease termed orchitis blennoragica (inflammation of the epididymis, and infiltration of its bstance with organized lymph, owing to the extension of ethritis sympathetically, or by metastasis), an occurrence ich may be expected when we find the vas deferens becoming ollen and painful. The testicle itself remains during the ole time unimplicated; it is, however, frequently displaced, d hence, in order to detect it, the part must be examined ry closely. The lymph is infiltrated so completely, and bemes so intimately combined with the substance of the epidymis, that the consequent hardness in many instances will t yield to any remedial agency; and though it may be somehat reduced by compression, it remains quite perceptible even ter the lapse of twenty years.

There exists naturally a sympathy between the mucous memrane and the skin. An exanthema is sometimes produced not ly by balsam of copaiba, but also by turpentine given for the re of gonorrhœa. The syphilitic cutaneous affections depend artly on the virus being either wholly neglected or imperfectly red, or, as is frequently the case, aggravated by the abuse of ercury, partly on the sympathy already alluded to. The peculiar form of the eruption depends partly on the condition of the skin, and partly on what has been termed the acrimony of the fluids or dyscrasy. Persons of a dark complexion and a dirty freckled skin are most liable to these eruptions. Itch appears to have less power in modifying the eruption than other dyscrasies, as, for instance, the herpetic. The occurrence of gonorrhœal ophthalmia and of syphilitic iritis furnishes strong proofs of the existence of a species of elective affinity, of an unknown metastasis from one diseased tissue to another predisposed to disease. The former affection, if it be produced by infection from contact, should be more frequent. Interruption of the urethral discharge is never the cause of epididymitis (on the contrary, inflammation of the epididymis and the parts in its vicinity acts as a derivative on the gonorrhœa, and arrests its flow), much less can it be exclusively the cause of inflammation of the remote conjunctiva. Hence, we must ascribe to this membrane (forming, as it does, a transition membrane between the mucous, serous, and cutaneous tissues), a greater predilection for the virus of clap than to the mucous membrane of the ear or nose. It is quite plain that iritis arises without contagion, and without any other metastasis than that common to all syphilitic affections. Indeed, it comes on frequently after a protracted treatment, either with or without mercury. The iris conducts itself here like the fibrous periosteum; it is not affected until some time after the external tissues of the eye, which afforded, as it were, a kind of point of attraction for the disease.

There exists, also, a peculiar disposition to condylomata, as pseudo-products, among which the conical condylomata, as being parasitic productions endowed with remarkable vitality, present the characters of the contagion in the highest degree. Whether the pathological process by which they are generated be the same as that by which the fungosities of ulcers are formed, and whether their bases be a structure intermediate between polypus and wart, remain still undecided. Dr. Fricke saw them appear as the harbingers of more serious affections, as, for instance, of fungus medullaris of internal organs. Prof. Otto (in his *Danischer Zeitschrift*, 1838, heft 2) relates an instance of their production as the result of unnatural coitus between two persons perfectly free from syphilis. Rognetta

(*Gazette Medicale de Paris*, June, 1836) describes a species of warty growth from the anus which might have passed for ondylomata had not the chastity of the individuals been well nown ; hence we are not, in all cases of condylomata, to assume he pre-existence of syphilitic contagion. Again, with the tenlency to form condylomata, there coincides a tendency in the kin to form warts and corns—a tendency, the source of which s probably seated in the mucous membrane of the kidneys, or f the digestive apparatus in general. The flat condylomata eal readily, but the conical can by no means be destroyed, so hat we are forced to leave them alone, and let them wear hemselves out. They prove themselves to be a mere secondary yphilitic formation by this fact—one cannot produce chancres om them : the moisture exuded by them produces only excoriaons and condylomata of the parts with which it comes in ntact, just as all acrid secretions do, and any secretion may e regarded as acrid to all parts to which it is not the natural imulus. The primary and secondary condylomata are very milar ; the circumference of the former, however, is less than at of the latter, and their secretion is not so copious.

With regard to affections of the bones (the occurrence of which dicates that the system has yielded to the morbid influence of e syphilitic poison), affections, too, which make their appearnce in persons disposed to cachexies, who have scarcely escaped ckets, and who have already a tendency to rheumatism and out, even here mercury is not free from all blame as a cause. his opinion is supported by the power which mercury has of estroying vitality, and hence of destroying the vitality of pseudoroducts ; by the circumstance of mercury in the reguline state aving been found in the bones, and the fact that these affecons disappear on the occurrence of symptoms of salivation.

It is an undeniable fact, that syphilitic affections, and even lcers resembling chancres, or the sores produced by inoculation ith the matter of chancre, may be congenital ; but it rarely ppens that infection takes place during birth, much as the ndition of the child's skin might seem to favour the reception the virus. Women labouring under syphilis in a very high gree give birth to children which are healthy, and continue so, st as occurs with mothers affected with herpes and other morbid edispositions. Where discharges or eruptions of a syphilitic character appear immediately after birth, they have already lost their contagious property (they cannot be reproduced by inoculation), and this seems to favour the opinion that the syphilitic contagion acts much more than others as a mere morbid stimulant, producing no peculiar cachexy, and merely maturing or modifying pre-existing morbid diatheses. Thus a scrofulous person, by means of syphilis, becomes more or less truly scrofulous, and in many cases for the first time only at a late period, and where his health has been disturbed by other causes, after the actual cure of the syphilitic affection. It is then not syphilis, but the original morbid diathesis modified by syphilis, which becomes propagated. Hence, in deciding on a plan of treatment, this diathesis, or, as we have termed it, *disposition*, is the chief point for consideration; and hence, also, results the curability of syphilis by so many different means. The same thing holds good with respect to what are termed relapses, which occur under every form of treatment, and more frequently under the mercurial; because, where there is hereditary predisposition, a new morbid stimulant will be given to scrofulous, herpetic, rheumatic, and gouty affections. Hence, too, the origin of those exceedingly obstinate chancrous ulcers of the prepuce, constantly reappearing after imperfect cicatrization, and consequently after detachment of the cuticle. The edges, for instance, remain callous; hence, slight motion is sufficient to break open again the badly-healed ulcer. In the latter case cataplasms, in the former astringent applications, to diminish the sensibility of the prepuce, produce the best effects.

Let me now call your attention to the conclusions at which he has arrived as to therapeutical principles. To establish the rationale of treatment, it would be necessary to attain a knowledge of the origin of the contagion; the mere treatment, it is true, does not require that any regard should be paid to the contagion; it can be cured without it, and mere experience will lead to the establishment and proof of a counter-poison and a real poison. But the theory of treatment requires this consideration. How, then, are we to ascertain the nature of the virus? The period of its origin may be more certain than the place, but the period is as remote as the persons who first observed the disease, and the constitutions which presented themselves for observation. The following facts, however, demand our attention:—

First. The contagion results from the contact of different individuals, and of the external skin or semi-mucous membrane of the male with the mucous membrane of the female.

Second. It is promoted by the mucus of the female, which is nclined to acrimony, and which, as well as the seminal fluid of he male, is a highly vitalized product, and looked upon as conributing to vital development.

Third. By the mixture and mutual neutralization or solution f different spermata, as well as by their predominant constituional influences.

Fourth. It is received when the sensibility of the part is in he most exalted state.

Fifth. It shows its action more especially on all the sensible rgans of reproduction; modifies, as has been already stated, very morbid disposition; or matures and stimulates the existing isposition to increased action or pseudo-production.

Now, if bearing in mind what we learn from physiology and herapeutics, we call the contagion a *pseudo-sperma*, or in other words a peculiar albumen—the result of the exercise of the enerative function—we thence get an explanation, 1st, of the ongestion which it produces in the generative organs, as in gonorrhœa; 2nd, of its tendency to attack and involve all the eproductive tissues, especially the skin; 3rd, of its tendency to he formation of pseudo-products; 4th, of its tendency, proved lso by the history of the embryo, first to attack sensible parts; th, then to develop itself according to certain antitheses (poles or metastes); 6th, the indications for treatment, the happy esults of which afford a further conclusion as to the nature of he disease, as well as an explanation of the success of other methods, and particularly of mercury.

The method of treatment to be employed deserves the name of he *antiplastic*. Sudden weakening of the system by venesection s, with a few exceptions, wholly unnecessary; on the contrary, he constitution may at first require a generous diet to enable it o sustain the reaction. If during its continuance the sores ncrease, they disappear so much the more speedily afterwards, hen the abstinence-cure is commenced. This, however, need ot be made a complete hunger-cure, and perhaps it has been aid down too strictly in the *Chirurgie Annalen;* the severity of should be lessened in proportion to the patient's improvement.

On the other hand, a too careful or solicitous attention to cleanliness cannot be shown.* Rest is an excellent antiplastic. During its observance chymification and assimilation are less active; all the functions are carried on with less energy; and thus the contagion, neglected as it were and limited in its seat, dies out of itself. Of itself it possesses naturally but little power, and where cleanliness and regulation of the diet are attended to, as well as a proper regard paid to the peculiar disposition of the patient and the course of the disease, rest may be less strictly enforced after the lapse of a few days. A plentiful meat diet is apt to bring on buboes, while a strictly vegetable diet tends to give rise to condylomata. Internally it will be sufficient to administer Epsom salts in such doses as to produce a few evacuations daily, and even in this point we may abate a little in our original strictness after a few days. Decoction of sarsaparilla, infusions of senna or carica arenaria, and the acids, particularly the nitric, are also employed with advantage. Hydriodate of potash, either with or without decoction of sarsaparilla, is an admirable remedy, and greatly esteemed in many parts of Germany.

Mercury, even supposing that it did not exercise a more injurious effect on the system than Peruvian bark, must, as a specific, militate against a sound knowledge of disease (for all specifics lead to a false system of therapeutics), and particularly of syphilis, in which everything depends on individualizing and accurately examining the morbid predisposition. The secondary forms in particular require a regulation of those functions whose disturbance constitutes the source of the disease, and consequently a regulation of diet in the strongest sense of the word. The stomach and skin are the two organs which are chiefly deranged. The same plan of treatment which we would follow in treating cases of herpes, scabies, scrofula, gout, rachitis, or periostitis, depending on ordinary causes, must be also followed where these diseases have been called into existence by the syphilitic virus. On the whole, however, secondary syphilis is rarer than is generally imagined. Neither secondary symptoms nor relapses require treatment different from that which is adopted in the cure of primary symptoms; a treatment the chief features of which are, that it is external, not opposing or obstructing nature, but rather assisting her by cleanliness, &c. Fresh air often cures cutaneous affections in a short time ; condylomata disappear after the lapse of a certain time under the use of a variety of escharotics, without our being able to fix on one as a specific. At all times regard should be paid to morbid states of the constitution, and morbid temperaments, and we should take especial care not to excite any cachexy in the patient. A mild limitation of vital activity is sufficient to cut off all support from the morbid parasitic action, or at least to obviate all unfavourable influences.

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* From this cause, as Dr. Fricke has often convinced himself, the rational method often fails in private practice. We are not able to enfórce cleanliness, which is generally attended with pain, and we are obliged to trust too much to the patient's statements.

A minute account of the modifications which have been made in the treatment described in the *Chirurgie Annalen* would require a treatise as long as that in which they were originally set forth. We must therefore refer to the work, as it would require a whole book to give the results of a thousand registered cases.

I have now given you the results obtained at Hamburgh by Dr. Fricke, respecting the non-mercurial treatment of syphilis; and I shall next lay before you some extracts from a paper published in the *Berlin Medical Gazette* by Dr. Struntz, and although I cannot agree with the learned doctor in all the conclusions he has drawn, yet his facts are too valuable to be passed over in silence.

The following is the sum of Dr. Struntz's observations on the non-mercurial treatment of syphilis in the venereal wards of the Charité Hospital at Berlin. These observations extend over a space of twelve months, and were made under the direction of Professor Kluge.

Of 741 patients (some of them greatly neglected), Dr. Struntz has not met with a single case in which the non-mercurial plan has not succeeded, when combined with a rational consideration of the peculiarities of the local disease. On the other hand, he has seen many out-patients treated with mercury for weeks and months together, without any advance being made towards the healing of primary sores, or in many instances without any effect in arresting their destructive progress. The primary symptoms more particularly alluded to are chancres and acuminated or broad condylomata.

In the Charité Hospital at Berlin not only primary sores, but all forms of the disease, from the slightest to the most intense, have been treated for the last half-year without mercury. It might be objected to the non-mercurial plan of treatment, that it does not afford any protection against the recurrence of the disease—that it does not ward off secondary symptoms. This may be very true, but neither does mercury. Among the many hundred patients who came under Dr. Struntz's notice during the course of a year (and to this point he paid the most particular attention) there was not a single case of secondary syphilis in which he did not discover, either from personal examination, or from an inspection of the prescriptions brought by the patients, that mercury had been used for the primary affection. If mercury, then, will not secure the patient from secondary symptoms, is it not unreasonable to have recourse to another plan, which, at most, cannot be attended with more unfavourable results, and which is free from the disadvantages of generating a double poison in the system. It is true that by proper attention to diet, rest, cleanliness, the avoidance of exposure to cold, and other precautions, most of the bad effects of mercury may be obviated: but how are we to secure the fulfilment of these conditions among the poorer class of patients outside the doors of an hospital?

Again, is the diagnosis of syphilitic ulcers so easy, that a man can pronounce at once that this or that ulcer is a true venereal chancre? How much observation and experience are required to enable a man to decide this apparently simple question! Is it not well known to every practical and experienced surgeon, that sores are frequently seen on the genitals, not produced by syphilitic affection, and yet presenting almost all the characters of syphilis?

The results obtained at the Charité were most satisfactory. All cases of primary sores, including condylomata (two-thirds of which are looked upon as primary symptoms), were treated successfully without mercury. The number of patients discharged cured was 733, and of these Dr. Struntz had not met with a single case of secondary symptoms up to the period of publication (September 30th). Many of these patients were prostitutes, and constantly under the surveillance of the hospital surgeons. Dr. Struntz does not wish to intimate that he places implicit reliance on the non-mercurial treatment pursued at the Charité, or that the method is infallible; all he wishes to say is, that of all the primary cases treated in this way at the hospital, not a single one was followed by confirmed lues, or even by those milder forms of the disease which have been described by Bonorden and others as secondary syphilitic exanthemata. Both modes of treatment were followed at the Charité, but it was found that under a similar management of the local affections, those patients who were treated with mercury could not be discharged for two, or three, or even four weeks later than those who had not taken any mercurial preparation. It is true that condylomata are apt to return, but this occurrence takes place as often under the mercurial as under the non-mercurial treatment, particularly when the local treatment has been commenced before the condylomata have completed their development, or where they have not been completely eradicated at first.

In cases of syphilitic exanthemata, psoriasis, and impetigo, where corrosive sublimate and red precipitate had failed, Zittmann's decoction was used with good effects; latterly, however, Dr. Struntz has been in the habit of giving a pint daily of a decoction containing sarsaparilla, carex arenaria, guaiacum, mezereon, sassafras, and senna; and, in conjunction with warm baths, and in more obstinate cases with nitric acid, he succeeded in accomplishing the desired effect. "It may be observed," says Dr. Struntz, "*en passant*, that in many cases, after, and during a course of mercury, particularly red precipitate and corrosive sublimate, I have seen psoriasis guttata and impetigo sparsa arise; the former disappearing after the mercury had been omitted. Latterly we had also some cases of ulcerated throat, and commencing ozœna with mercurial complication. It may appear somewhat bold in cases of this kind to exchange an old and esteemed remedy like mercury for sulphate of magnesia; but in our patients, the racking pains of the head and nose were relieved, the discharge ceased, and the ulcers healed in a remarkably short space of time. About the commencement of July three young men were admitted into the venereal wards. One of these had been under a course of calomel and corrosive sublimate previous to his admission; the others had also taken a considerable quantity of mercury, and were labouring under ozœna and periostitic pains. By the use of sulphur baths, the hospital decoction, and a nutritious diet, all were greatly improved in the space of a fortnight, and their improvement went on so rapidly that one was dismissed cured at the end of the month, and the ulcerated sore throat was beginning to cicatrize. A case of syphilitic iritis is deserving of notice.

"A servant girl had been admitted in the August of the preceding year for condylomata, which extended from the orifice of the vagina to the anus. She had been treated with calomel, and afterwards with corrosive sublimate, and the condylomata were either cauterized or removed by excision, but still returned as fast as they were destroyed. She then took Zittmann's decoction without benefit, and after some time reverted to the use of calomel. Scarcely had her mouth become fully affected (she had taken 7 doses of 10 grains each) when she was attacked with an impetiginous eruption of the face, and soon after with iritis, bearing all the characters of a syphilitic inflammation. Blood-letting, leeching, and antiphlogistic measures were employed, but in spite of every precaution an abscess formed on the iris. The calomel having proved useless was discontinued, and the patient ordered the decoctum lignorum specieum of the *Pharmacopœia Militaris*, combined with a mild antiphlogistic treatment. Under this treatment the pus, which lay at the bottom of the anterior chamber, was reabsorbed in the space of a fortnight, the pupil resumed its natural form ; in a word, all the traces of iritis had so completely disappeared, that many professional men could not distinguish the sound from the previously diseased eye unless it was pointed out to them. She was completely cured of her obstinate primary symptoms by the non-mercurial plan. I cannot decide what share mercury may have in the production of these secondary affections, but I cannot believe that it is wholly without influence on their origin."

Such, gentlemen, are the facts recorded, and the observations made, by Dr. Struntz, to which I shall now add the contents of a letter which I have received from my friend Dr. Oppenheim, of Hamburgh—a gentleman whose extensive practical experience, derived from upwards of a thousand cases, entitles his opinions to the most attentive consideration :—

"On receiving your letter I endeavoured to fulfil your wish, and the result of my endeavours is the following sketch. I fear it will not give you full satisfaction, being rather theoretical than practical, but it was impossible for me to examine all the Hospital Reports and cases in so short a space of time. I have, therefore, commissioned a very industrious young physician to communicate he points held in view in Fricke's treatment, and the following nanuscript is the result:—

"In Hamburgh the number of non-mercurialists increases laily; among the young physicians, who have been practitioners or the last eight years, there are only two or three mercurialists. In fact, I very seldom meet with truly malignant and inveterate ases, and these are always cases in which a great deal of mercury has been taken previous to admission into hospital. For such cases as exanthemata or lepra syphilitica, broad condylomata, nodes, tophes, syphilitic gout and rheumatism, I know but two remedies, which I employ alternately, according to the constitution, age, season of the year, circumstances of the patient, &c., viz., Zittmann's decoction, repeated, if necessary, at intervals, and the external and internal use of hydriodate of potash (ʒss.—ʒj. in the 24 hours).

"Disease of the bones, or of the periosteum, I have not met with in any case in which the patient had not taken mercury.

"With respect to chancres, when in the first stage (the chancre-vesicle), I touch them with caustic; afterwards the treatment is regulated by the degree of inflammation (painfulness) present. Rest (the recumbent position) and diet are most important means; the large, mound-like indurations are best treated with poultices. One of the best applications for promoting the healing of chancres is *copper*, in the form of Köchlin's solution, diluted according to the sensibility of the patient.

"Recent buboes I endeavour to disperse by abstraction of blood and compression; when these means fail, and they become chronic and indolent, with an inclination to suppurate, the superincumbent skin is covered with lunar caustic (more rarely a blister), which produces either dispersion and reabsorption, or healthy suppuration.

"With respect to the frequency of secondary symptoms, private practice affords us no information. From our hospital experience, they appear to be not more frequent than under the mercurial treatment; but the form is different; that is to say, there is less venereal sore throat than exanthemata.

"Gonorrhœa is a most annoying form of disease—it is cured, and is not, by every plan of treatment. Copaiba, in various forms and combinations, after the inflammatory symptoms are removed, proves more serviceable than cubebs. In gleet most advantage is derived from keeping a bougie in the urethra.

"Melancholia syphilitica is a frightful disease, one for which there is often no remedy to be found, and under which the patients pine away.

"This is the substance of my brief communication; but I shall always feel most happy in answering any questions you may propose. With respect to Copenhagen or Berlin I cannot give you any information, except, that in the Charité, Kluge has renounced mercury."

To render the subject more complete, I shall now give the opinions of my respected friend, Dr. Staberoh, of Berlin, also communicated in a letter, which I received on the 25th of October, 1838.

"In the hospital at Berlin, called the Charité, syphilitic patients are still treated without mercury; even in the worst cases its employment is less frequent than in Hamburgh, under Fricke. According to the published reports, the results of this treatment are very favourable; these reports you will find in detail in *Rust's Magazine*, and also an extract from them in *Kleinert's Repertorium*. But, however favourable these reports may be, one curious circumstance must be borne in mind, viz., that secondary syphilitic affections are not usually admitted into the hospital destined for venereal patients, but sent into the wards of the surgical clinic, so that in the venereal department the great majority of cases which come under treatment are primary affections. These patients are dismissed as soon as cured, and they scarcely have in the Charité any means of ascertaining the frequency of secondary affections. The published reports naturally take a colour from the opinions of the physicians who are opposed to the use of mercury, and those who visit the wards have seldom an opportunity of watching accurately the progress of the cases. I am not aware that any comparative trials have been made between the mercurial and non-mercurial plans. Such may have been instituted formerly, but certainly on an insufficient scale. No person could have better opportunities of making them than the army surgeons, particularly since the inspection of the genitals, directed by law, brings the syphilitic affections of soldiers under their observation from the very commencement. In order to obtain as ccurate an account as possible of the treatment of syphilis in he army, I addressed myself to the 'General Arzt,' Lohmeier. Iowever, strange to say, there is no printed account of the natter, and the reports which are in existence are of such a ature as to preclude the possibility of stating anything lefinitely. Most of the old army surgeons treat syphilis with nercury, but many of those lately appointed, and who were on he Hospital Staff when Professor Kluge followed the non-nercurial plan of treatment, do not employ mercury. They are ilso satisfied with their treatment, although it is said that in ome instances they have had recourse to mercury in conse-uence of the failure of the simple method. Even were it in ny power to give numerical statements, they would prove othing, since the decision of the question would depend on ubmitting an equal number of cases to the two modes of treatment.

"As the army surgeons are not bound to any particular mode of treating syphilis, it would be easy for them to institute such omparisons, if they were conducted without prejudice. In England, physicians and surgeons in extensive practice are generally connected with hospitals also; the case, however, is quite different at Berlin. I cannot refer to Dr. Kluge's private practice, for he does very little in town; and I am acquainted with only one eminent physician who treats syphilis without mercury—and, after all, his private practice is not large enough to warrant our drawing from it any conclusion. Medical men are livided on the treatment of syphilis; the physicians, however, n largest practice use mercury without looking on it as a specific. I know a physician who tried the non-mercurial plan on a small cale, without its results inducing him to change his plan of reatment. After all, if the want of confidence in the non-mer-urial treatment expressed by the physicians here proves nothing, t says but little in favour of the results obtained at the Charité, nd which even have been adduced by some as instances of an nefficient method. In conclusion, I shall just sum up the esults of these imperfect statements, which I have not attempted o render complete, fearing that they will arrive too late to be f service.

"1. The syphilitic patients in the Charité take no mercury while in the venereal wards under Dr. Kluge's care.

"2. In the surgical wards, where most of the cases of secondary syphilis are found, and into which no primary cases are admitted, the patients are treated with mercury.

"3. Any statement of the proportion of relapses in the cases treated at the Charité after the non-mercurial plan must be very uncertain, if not impossible to be ascertained.

"4. In town the mercurial is employed in preference to the non-mercurial treatment.

"You are, without doubt, acquainted with the publications of an army surgeon, Dr. Bonorden, at least through the abridgment in *Kleinert's Repertorium.* He, too, seems not averse to the non-mercurial plan of treatment; and most practitioners speak of it with respect, although they do not follow it. Professor Krukenberg, of Halle, was, at least a few years since, a strenuous defender of this plan, and alluded to the employment of mercury as an instance of prejudice. Many of his pupils have brought these ideas with them into practice, but I have not as yet seen any brilliant results from them. The case may be the same as with all absolute methods; every practitioner has seen primary sores cured by simple cooling treatment."

LECTURE LXV.

SYPHILIS CONTINUED.—SYPHILITIC OPHTHALMIA.—SECONDARY SYMPTOMS.—USE OF MERCURY.

NOTWITHSTANDING all that has been done to illustrate the pathology and treatment of syphilis, it must be confessed that these subjects are still involved in much difficulty and doubt. A fact so incontestable, and so much to be regretted, makes it the imperative duty of every clinical lecturer to contribute whatever materials his experience may supply in elucidation of questions so important. For this reason I have been induced to lay before you the observations in my last two lectures on detached points of interest connected with the venereal disease. I shall, therefore, beg leave to direct your attention to-day, first to the case of a woman lately admitted into our wards labouring under syphilitic iritis.

From the history of her symptoms we learned that, after a primary venereal affection, she got pains principally affecting the joints of the upper extremities, and aggravated at night. About a fortnight after admission she was attacked with papular eruption and syphilitic iritis. I beg you will recollect the character and order of this woman's symptoms; at first she would not admit the existence of a venereal taint, stating that her pains were only rheumatic, and that she knew no cause for them except cold. Now, in her case, the arthritic affection was seated chiefly in the smaller joints; one of her wrists, and the hand and finger joints were swollen, tender, and painful, and, at the first glance, had a very strong resemblance to the hand of a person labouring under rheumatic arthritis. It is generally believed that pains of a syphilitic character occupy chiefly the shafts and ends of the long bones; but in this instance we find that syphilitic inflammation may give rise to swelling, tenderness, and pain of the small joints, corresponding in many points with what has been regarded as rheumatic inflammation. We have another case of syphilitic inflammation of the synovial membrane and joints in a young woman in the small wards; but in this case the larger joints are chiefly affected. It is absurd to suppose, when a general disease like syphilis produces pain and inflammatory swellings, that they should be always limited to the long bones or their periosteum, for we find many instances in which the synovial membranes are also engaged.

A point worthy of notice in this case is the manner in which the iritis appeared. We were treating the woman for the pains I have just alluded to, when she was attacked with iritis in a very insidious manner. There was scarcely any pain over the orbit, vision was but slightly impaired, there was no remarkable alteration in the state of the pupil; in fact, with the exception of some intolerance of light, and some conjunctival redness, there was scarcely anything to indicate the occurrence of iritis. But whenever a person suspected to labour under syphilis gets inflammation, particularly if limited to one eye, no matter whether it commences in the internal or external tissues, you should watch it closely, for the chances are that it will prove syphilitic ophthalmia, endangering vision. And such was the result in this case; for in four or five days the woman exhibited symptoms of decided iritis. It has been very properly remarked that the name syphilitic iritis is calculated to mislead: for the iris, in many cases, is not the part principally or primarily attacked; and, in some instances, it appears to escape entirely, although the vision is lost. Syphilitic ophthalmia appears a better name for this affection.

There is scarcely any disease which occasionally proves so insidious in its approach as syphilitic iritis, nor is there any form of internal inflammation more variable in its progress, degree, or intensity. Sometimes it commences internally, attacking in the first instance the tissues of the iris and the adjoining parts, proceeding in its course with remarkable intensity, and destroying vision completely, if not arrested at once. In such cases it is accompanied by severe pain, intolerance of light, lachrymation, and increased vascularity of the sclerotic, so that no one can mistake it; but at other times its approach is so insidious, and its progress so slow and painless, that the vision of one eye is lost before the patient is aware of it. The iris is then seldom engaged until a late period of the disease; and the slow

flammation by which vision is ultimately destroyed commences
the deep-seated tissues of the eye. In many cases, as in that
ow before us, it takes a contrary direction, commencing in the
ternal parts of the organ, and being usually ushered in by con-
nctivitis, apparently simple, and produced by cold. Hence,
u perceive, there is a great variety as to the mode of origin,
rogress, and intensity of syphilitic ophthalmia, and from this
ou will infer that there must be some diversity in the treatment.

The physician is to be chiefly guided by the intensity with
hich it attacks the eye, and hence the treatment which would
e proper for one case would be wholly unfit for another. I
m anxious to advert to this matter, as I think we did not treat
e case of this woman as we ought to have done, had we con-
dered its nature more attentively. If syphilitic ophthalmia be
f an intense character, attacking the iris and lens at once, and
reatening to destroy vision in a few days, the activity of our
eatment must be proportionate to the imminence of the
anger; we must bleed, leech, and give calomel and opium in
rge doses, say ten grains twice or three times a day, and must
ntinue its administration until the mouth is affected. In this
stance, a disease that would destroy vision in three or four
ys is cured in the same space of time; and the activity of our
eatment is adapted to meet the intense and rapid character of
e ophthalmia. We produce full salivation in as short a time
possible, and apply the extract of belladonna to the eyelids to
ep the pupil from contracting.

In syphilitic iritis there are many shades of intensity, and the
eatment must correspond with the existing symptoms. Now,
the disease be of a chronic nature, and has advanced slowly,
must be made to recede slowly. You should endeavour
remove it by the gradual ingestion of mercury, aided by
e usual local means. In the former case you have only
ree or four days for action, in the latter you have as many
eeks. Hence, I think, we were too precipitate in our treat-
ent of this woman. Her disease came on slowly, and without
olent or urgent symptoms, consequently we ought to have
eated her mildly, giving small doses of calomel or blue pill,
as to bring the system gradually under the influence of
ercury. But we salivated her at once, and the consequence
as that, although she improved at first, the disease became

afterwards exacerbated. Had salivation been gradually superinduced, the relief obtained would have been less speedy, but more certain and permanent.

Let us now apply these principles to the case of the young man who has been admitted this morning, presenting symptoms of secondary syphilis in a well-marked form, but simple and uncomplicated by any previous treatment. He took no medicine for the primary or secondary symptoms, except two pills, which he got at the dispensary about two months ago, and which were not followed by any sensible effect. The secondary symptoms came on with pains and feverishness, and are at present extensively diffused over his body in the form of elevated blotches, of a character intermediate between the papular and squamous. About four or five days back he was advised to take a warm bath for his pains, but having to walk a considerable distance afterwards, the day also happening to be chilly and sharp, he got cold in returning home, and soon after experienced pain in the left eye, with lachrymation and diminution of the power of vision. Had he been exposed in the same way while in health, he would probably get slight conjunctivitis, or sore throat, or bronchitis; but the case was altogether different with a man labouring under a constitutional affection, having a tendency to manifest itself in almost every tissue of the body, and prepared to modify every form of inflammation to which accident might give rise. Again, if a man's constitution was in a sound state, his feverish cold or conjunctivitis, or sore throat, could be removed by very simple means, such as bathing the feet, taking a little warm whey on going to bed, and some opening medicine the next morning. But here the state of the constitution occasions the substitution of syphilitic iritis for simple conjunctival inflammation, and demands a peculiar plan of treatment. You are now aware that persons who have taken mercury for syphilis, without being entirely cured, are very liable to get iritis on slight exposures. Some persons attribute this entirely to mercury; but mercury in such cases merely acts by rendering the patient more liable to cold, so that when iritis occurs in a patient who has been under a mercurial course, it is not in consequence of the direct operation of mercury, but by its increasing his liability to be affected by impressions from cold. For the same reason, the circumstance of his having taken mercury before is not, as some persons maintain, any argument against his using it a second time.

On examining this man, we found that he had some pain referred to the eyebrow; the eye is also more vascular than natural, and presents that appearance which is so characteristic of iritis; there is some alteration in the colour of the iris along its free margin, but no irregularity of pupil. Along with these symptoms there is dimness of vision, and objects appear as if seen through a veil. This arises not from any opacity of the cornea, or opalescence of the aqueous or vitreous humours, but from inflammation affecting the iris, ciliary zone, and probably the coats of the retina. In such cases, where the inflammation spreads from the iris to the ciliary zone, it would appear that the ciliary nerves and retina partake in the mischief, for vision becomes affected before we can discover any appearance of derangement in the optical instrument. The peculiar appearance of the eye in this man, the change of colour in the free margin of the iris, and the diminution of the power of vision co-existing with an eruption of the skin, point out the nature of the disease, and that the affection of the eye, though proceeding from a common cold, has been modified by the syphilitic taint in the constitution.

In order to prepare his system for mercury, I have ordered him to be blooded, purged, and put on the use of antimonials for two or three days. Venesection, purging, and tartar emetic may be of some use in relieving or arresting the symptoms of iritis, but I do not place any great reliance on them for removing the disease; I merely employ them as auxiliaries, depending on mercury for the cure. And let me again observe, that there is considerable variety in cases of iritis. Some are extremely mild; there is no palpable sign of acute inflammation present, and the chief symptom is diminution of the power of vision; such attacks are sometimes not perceived by the patient until some accident informs him that the sight of one eye is nearly gone. In other cases, after reaching a certain point it begins to decline, and frequently terminates spontaneously. Others present symptoms of a more decided character, but still are free from danger. Every attack, however, where the inflammation is at all of an intense character, will go on to destroy vision, unless met by prompt and efficacious treatment. In this man's case the symptoms are not very acute, and hence there is no necessity for having recourse to mercury at once; the disease might certainly terminate in disorganization of the eye, but it would be some weeks before this would be accomplished. On the other hand, there are cases which, if neglected, would destroy vision irremediably in the space of three or four days. Such cases require extremely prompt and energetic measures. But where iritis is not of a violent kind, you need not depart from the plan of treatment you would have laid down for the cure of syphilitic affections where no iritis existed. Here you bleed, leech, apply belladonna to the eye, and give calomel in doses of ten grains or a scruple every third or fourth hour, so as to bring the system as rapidly as possible under the influence of mercury.

With respect to belladonna, I believe you are all aware of its value in iritis. Some think that its action is merely mechanical, that it dilates the pupil and no more; but I am firmly convinced that its influence is not limited to mere dilatation of the pupil. I believe that it acts on the vitality of the eye, and that when employed externally or internally, it possesses the property of diminishing the irritability of that organ, and thus tends indirectly to remove local inflammation. In scrofulous ophthalmia, where the eye is exquisitely sensible, where the slightest exposure to light causes intense pain and copious lachrymation, one of the best remedies I am acquainted with is belladonna, given internally. Thus you perceive that belladonna has not only a mechanical action, producing dilatation of the pupil, and tending to prevent adhesions, but also by its influence on the retina and ciliary nerves, diminishes the irritability of the eye, and aids materially in effecting the removal of local inflammation.

You will, then, whether you treat syphilitic iritis, or syphilitic pains and periostitis, or sore throat, or eruption, be guided by the character and progress of the symptoms. If the disease has come on gradually—if it be mild or chronic in its nature, and no vital part threatened—you may take time, and proceed gradually in mercurializing your patient. But where the vitality of an organ or part is endangered, you must act with promptitude, and throw in mercury, as it is termed, at once. Thus, as I have already remarked, where syphilitic ophthalmia attacks the eye in such a manner as to be likely to destroy vision in a few days, it will be necessary for you to give five or ten grain doses of calomel e times a-day: and the same line of practice will be required n periostitis attacks the orbit, particularly the thin plate of between the eye and the brain, or when it fixes itself in the rnal table of the cranium, and threatens the dura mater.

may observe here that a consideration of the nature of those es in which scrofula is most commonly developed, will give much information with respect to the administration of cury in venereal affections, and the energy with which this t is to be employed on various occasions. The vitality of white tissues is low, and their inflammatory affections of a e subacute and chronic character; and hence not demanding energetic treatment as where tissues of a higher order are ked. This you may lay down as a general rule. But there some exceptions, as in the case of an organ composed of us tissues, as the eye; or when it attacks purely albuminous es in a very acute and intense form. In general, the vitality riosteum and bone is low, and so is that of most of the tissues e eye; and whenever you have to treat inflammations of such s, you should not expect to be able to produce any sudden ge, for parts of this description require a considerable time he restoration of their healthy functions. Hence, in the rity of cases, periostitis and syphilitic ophthalmia, with the ptions already alluded to, are to be removed by a mild alteratreatment, by small doses of mercury and gentle frictions, so some weeks shall elapse before the mouth is affected. Nor ld you attempt to bring on full salivation: touch the gums tly, and keep them in that state for some time, exhibiting as h mercury as will just keep up its influence in the system.

shall again recur to the subject of periostitis, but I may here rve, that you will require considerable discrimination to rmine in some cases whether the affection you are about to is syphilitic or not. You will find many examples of stitic inflammation depending wholly on a scrofulous taint e constitution; for scrofulous inflammation is often fugitive, attacks the periosteum before it fixes in the bones. You also have periostitis from rheumatism, or from gout; but of the most common causes of periostitis, in persons not ring under syphilis, is connected with the secondary effects ercury on the constitution. Persons who have taken mercury ny disease, no matter whether it be pneumonia, pleuritis, or hepatitis, are afterwards subject to periostitic inflammation, and this liability continues not for months only, but even years. Indeed, periostitis is one of the most common effects of mercurialization, particularly if the patient be exposed to cold while taking mercury. In the course of one, two, three, five, or even a greater number of years, exposure to cold, a blow, and other apparent trivial causes, give rise to periostitis in some individuals. I have attended, with Sir Philip Crampton and Mr. Cusack, a gentleman labouring under periostitis of the tibia and cranium; and on inquiring into the history of his case, we found that it was nearly nine years since he was salivated. I have also witnessed a very severe case of periostitis affecting the shafts of both tibiæ in a lady who took mercury about five or six years ago for supposed hepatitis.

One of the most remarkable cases of periostitis after mercury which ever came under my notice, I witnessed in the person of a gentleman who was for some years surgeon to the British Envoy to Mexico. In that country, raised nearly 12,000 feet above the level of the sea, and exposed at once to sharp winds and a burning tropical sun, fevers of an intense character often prevail. Some time after his arrival, this gentleman was attacked with fever, for which he was fully salivated. He caught cold during his convalescence, and was attacked with periostitis, and cured by mercury as before. The year after, the same series of accidents was repeated. I forget how many successive attacks he had, each originating from cold, and each, like the former, removed by mercury. At length the mercury seemed to lose its power over the disease, and was no longer capable of relieving it. He returned to this country with the view of improving his health by change of air, and presented a most extraordinary spectacle. The periostitis had chiefly fixed itself in the cranium, which it had altered so as to have no longer any resemblance to the human skull. When I saw him, a considerable portion of the pericranium and bones of the head had been affected with periostitis for three years without any intermission. His skull would have defied the scrutiny of Gall and Spurzheim, for its shape was the most extraordinary I ever witnessed. He was in the habit of taking large quantities of opium to procure some alleviation of his sufferings, and was restless to such a degree that he was frequently for fifteen or twenty nights together without an hour's sleep. Altogether he was in the most pitiable state; and seldom got any relief until the attacks were wearing off, when he enjoyed some brief intervals of repose.

Some fifteen or twenty years ago, when the subject of the treatment of syphilis was warmly canvassed, it was asserted by the mercurialists that mercury never gave rise to nodes or periostitis, unless where there existed a syphilitic taint in the constitution. Now I can attest from manifold experience that this is not true; the gentleman whose case I have related had never been affected with syphilis. But there is no necessity of insisting on this point; every practical physician knows that mercury may and does give rise to a train of symptoms bearing some analogy to those of secondary syphilis. Thus, after the use of mercury, a patient may be attacked with feverishness, pains in the bones, nodes, sore throat, and an eruption to which the name mercurial eczema has been given. Here you perceive we have a remarkable analogy between the diseases produced by mercury and syphilis. Mercury when exhibited improperly may produce all the affections I have enumerated, and, in addition to these, caries of the bones, particularly of the nose and palate. It is well known that some active remedies have a tendency to produce diseases somewhat analogous to those they are known to cure. This is frequently observed with respect to mercury, belladonna, strychnia, quina, hydriodate of potash, and some other powerful medicinal agents. In fact, it is hard to expect that a remedy will cure a disease affecting a certain tissue or tissues, unless it has some specific effect on such tissues; and in this point of view we have an example of the "*similia similibus curantur*" of the homëopathists.

Mercurial ostitis of the head is a very common form of disease; its more usual seats are the frontal and parietal bones, but it is sometimes observed also on the other bones of the skull. In general, the inflammation affects the external table of the bone, and is then easily recognized from the tenderness and swelling of the corresponding portions of the scalp. Sometimes, however, the inflammation commences in the internal table of the skull, and where this occurs, the disease wears a much more alarming aspect, for it is then apt to implicate the dura mater and subjacent portions of the brain. In such cases, the true nature of the complaint is not unfrequently overlooked, or mistaken for some other disease causing headache. This is a very serious and fatal error, for unless the physician is aware of the real nature of the malady he has here to contend with, he will seldom adopt proper measures, and the patient will fall a sacrifice. Such cases are indeed obscure, but we may in general make out their true nature by a careful attention to their history. Thus, if severe nocturnal headaches arise in a person who has ostitis in other bones, and if the pain darts from some fixed point, then, although all external tenderness be wanting, we may safely conclude that the cerebral affection originates in ostitis of the cranium. In investigating such cases, I have derived much advantage from percussion. I place the back of one finger on the patient's head, and tap it smartly with the fingers of the other hand. If internal ostitis be present, every tap excites a peculiar internal pain in the part affected, which pain is the greater the nearer the part percussed is to the seat of the disease.

You have seen in our wards several men complaining of very agonizing headache without any external tenderness; and you have witnessed in these cases the failure of the common means for relieving pain in the head, and the success which followed the adoption of a treatment founded on a true diagnosis of the disease. This headache,—yielding to no other species in severity, depriving the patient altogether of rest, occasionally occupying chiefly one side of the head, and most severe at certain hours,—is not unfrequently mistaken for nervous hemicrania, and treated with iron! When ostitis occupies the external table of the cranium, it seldom strikes inwards, so as to engage the internal, and disorder the brain. That it does so sometimes appears from several cases; among the rest, that of Mary Wilkinson, admitted into our ward on the 21st of October. In her the scalp was excessively tender, and felt in one part thickened and boggy. There were dilatation and increased pulsation of the external arteries supplying that side of the scalp. On the 27th the headache increased, and she fell into a state of profound coma, with dilated pupils insensible to the light; the extremities were cold, and pulse scarcely perceptible. Luckily, while in this state, the mercury previously administered began next day to affect her mouth, and, aided by large doses of calomel and powerful blistering, soon restored her. Such a recovery very seldom takes place. Ostitis is also very dangerous when it occupies the orbital and ious portions of the frontal bone. It is very obscure when at the base of the skull.

curial ostitis is a very common occurrence in the cervical æ, but comparatively rare in the dorsal. In the lumbar mes again more frequent, but not so much so as in the l. I have, however, seen some cases where the dorsal æ appeared to be almost all engaged in the disease, and consequently, the greatest agony was experienced on their touched or moved. Pathologists have not yet paid nt attention to the species of neuralgia which is occasioned ammation of the nerves or their sheaths spreading from rface of the bones through which they pass.

hing is more certain than the fact that, in many, the abuse ı the use of mercury renders the constitution disposed to on future occasions, when cold and damp act on the body, lly if fatigued by exercise, or exhausted by dissipation. ostitis is consequently called mercurial: but this name ıot mislead us; for, strange as it may appear, the disease ields readily to mercury—a mode of treatment generally al for the moment, but attended with the obvious disad- e, that it leaves the patient more liable than ever to future vere relapse, which will at last refuse to yield to mercury.

re are two cases of syphilis in the house at present, one female, the other in the male chronic ward, on which I o make some observations now. They possess no peculiar ıt beyond the ordinary run of syphilitic affections, still they e a share of your attention; for it is on your experience of lual cases, much more than on the knowledge derived books, that your treatment of this obscure and protean y will depend.

not more than a year since the female patient received philitic poison into her constitution. What the nature of rimary sore was we cannot ascertain, but, from the account ıs given, it seems to have been true chancre. Some time his occurred she got sore throat, articular pains, and an on, for which she was treated in this hospital about ten ıs since, and dismissed apparently cured. The disease, er, returned in a few weeks, and she has been labouring its effects up to the present moment. Three circumstances s case demand our attention: first, the re-appearance of syphilis after a mercurial course—for she was mercurialized here soon after her first admission; secondly, she exhibits a degree of syphilitic cachexy, being rather pale and emaciated; and, thirdly, the slow progress which the disease has made in her system, being limited to a few blotches on the skin, some periostitic swelling of the bones of the leg, pains, and slight arthritis.

In treating this case I intend to give mercury, so as to affect her system; and, having accomplished this, I shall keep her under its influence for some time. I shall also, should it appear necessary, order her a free allowance of the decoction of sarsaparilla. Under this treatment you will find that the eruption will soon disappear, the periostitic pains and swelling be removed, and the constitution begin to improve. She has been ordered three grains of blue pill and half a grain of calomel, three times a day—a quantity which you will generally find sufficient to bring on mercurial action in females. I have no doubt but that the disease will, in this case, yield to mercury in a very short time, and that her health will be completely restored. The failure of mercury in producing a permanent cure, on a former occasion, is no argument against its employment here; if there were no syphilitic taint in question, I do not know any remedy by which the cutaneous affection and the periostitis could be more effectually relieved.

The other patient, John Kelly, presents an eruption of red scaly blotches, extensively diffused over the trunk and extremities, and closely resembling psoriasis. This man, like many others, denies the occurrence of a recent syphilitic taint, and gravely states that it is some years since he exposed himself to infection. Instances of this kind are to be met with every day; patients will not tell the truth about these matters, and false statements tend to throw a darker shadow over a disease in itself sufficiently obscure. However, in this case, the poison seems to have confined its effects to the cutaneous surface; there is no affection of the throat, periosteum, or joints. The eruption covers almost every portion of his body; it made its appearance two months before admission, and was preceded by feverish symptoms and pains in the larger articulations.

In undertaking the treatment of this case, there is one practical point to be held in view. The man's general health is good, his strength undiminished, and his circulation active. I therefore ordered him to be blooded, and have kept him for eight or nine days on antimonials and low diet. By preparing him in this way, I knew that the mercury which I intended to give him would act more rapidly on his system; and such was the case—for on the second day after he commenced using it his mouth became affected. But here a difficulty arose, which, in cases of this description, is apt to embarrass our treatment; the mercurial influence appeared much sooner than I expected or wished. He had been ordered three grains of blue pill and half a grain of calomel, three times a day; and on the second day, before he had taken six pills, salivation commenced. Now, in all cases where mercury affects the mouth sooner than you desire, and as it were in spite of you, it will not do as much good as where its action proceeds regularly and in accordance with your purpose.

It is a general rule, that most benefit is to be expected from mercury where its action is regularly progressive, or where the quantity taken is in proportion to the effect produced on the system. Hence we look upon it as an unfavourable occurrence, when a small quantity of mercury occasions sudden and copious salivation; such an event deranges our calculations, and tends to embarrass our practice. Now in this case the patient, after taking five pills, became salivated on the second day. We found we had been going on too fast; it was necessary therefore to pause, but not to desist. We accordingly reduced the quantity of mercury to three grains of blue pill and half a grain of calomel, to be taken every second night. By these means we kept up a slight discharge of saliva, and the man's symptoms began to improve. The eruption is now disappearing rapidly, and it is to this point I wish to call your attention. What are the marks which indicate the subsidence of an eruption of this kind, and by what criterion are you enabled to judge of the progress of the cure?

When the parts are about to return to their healthy condition, three circumstances occur: first, the vivid red or copper colour of the eruption begins to fade; secondly, the heat of the affected parts becomes reduced; thirdly, the excessive secretion of morbid cuticle is arrested, and the quantity of minute scales covering the blotches diminished. In such cases the affected parts of the skin are highly vascular, and the secretion of cuticle is morbidly excessive in quantity; hence the continued desquamation from the surface of the blotches. You should, therefore, not merely attend to the colour of the eruption, but also to the quantity of minute scales on each blotch, when you wish to ascertain whether the eruption is fading or not. You can judge of this by your eye, or you tell it by passing your finger over the diseased surfaces. The fading of the colour of the eruption, the decrease of the elevation and roughness in the blotches, and the gradual disappearance of the minute scales—these are the circumstances by which you can ascertain the subsidence of a syphilitic eruption. As the cure progresses, you find the parts assuming a more natural appearance: the same quantity of morbid cuticle is no longer thrown out by the affected spots of corium: the blotches become smooth and lose their elevation, and, finally, the red colour of the skin disappears. Of all the symptoms, discolouration of skin is the last to recede, and it generally happens that enough has been done in the way of treatment long before the skin resumes its natural complexion. If you were to continue the administration of mercury until the natural colour returned, you would very often push it to a useless and even dangerous extent. In such cases, a faded brownish or dirty tinge remains long after the re-establishment of healthy action.

In one of the first lectures which I have given on this disease, I stated that, notwithstanding the host of facts bearing on the question of the non-mercurial treatment of primary and secondary syphilis, there is still much difference of opinion amongst men of the highest rank in the profession. One good has resulted from the statements put forward by the army medical practitioners, namely, that mercury is no longer abused in the empirical and barbarous manner followed by our predecessors. Few, if any, at the present day, will be found to enter upon long and exhausting courses of mercury for slight chancres or sores, in persons of delicate or scrofulous constitutions; and I believe the opinion is growing stronger and more general every day, that when primary symptoms occur, although mercury be omitted, or merely used as an alterative, the disease may be successfully treated. Let me, however, be understood in this matter. I make this statement in reference to those cases only which the disease is treated from the commencement, and ot allowed to go on unchecked for days or even weeks. I have ready brought forward evidence to prove, that when genuine ancre is treated properly from the beginning, it may be cured ithout mercury. There must have been several cases of true ancre among Dr. Roe's patients, and yet of the entire number ere was only a single case of secondary venereal, and that in a atient broken down in health and labouring under bubo for a nsiderable time before admission.

But you will ask, Is it possible to cure secondary symptoms ithout mercury? If you are to believe some authors, you annot. According to their views of the case, a patient labourg under secondary symptoms, if treated without mercury, may et well for a while, but the disease will return again and again ntil it breaks up his health. All I can say on the point in uestion is this, that I have seen several cases which were proounced secondary syphilis get completely well without mercury. bout ten or twelve years ago there was a case of secondary yphilis in this hospital, which I undertook to treat without ercury. It was a case of well-marked papular disease, which d made its appearance about six weeks after the primary re; and, to remove all doubts on the subject, I showed the an to the late Mr. Hewson—a gentleman justly esteemed for is accurate and extensive knowledge of the venereal disease. e pronounced it at once a case of true syphilis, and added that could not be cured without mercury. As there was no urgent ason for the exhibition of mercury, I thought the matter orthy of experiment, and treated the man with purgatives and ntimonials, followed by vegetable alteratives and nitric acid. I d so, and succeeded in effecting a perfect cure. I kept the an afterwards under surveillance, to see if a relapse would cur. He never had a return of the disease, and Mr. Hewson as quite struck with the result, as he had no conception that e patient could be cured without mercury. Indeed this was e general opinion, the other surgeons of the Meath Hospital aving arrived at the same conclusion. The case made a very rong impression on my mind, and, connected with others aving a similar result, has convinced me that there is some uth in the statements of those authors who say that syphilis n be cured without the mineral.

On the other hand, I must confess that there are some cases which answer the description given by Mr. Colles, and which cannot be cured without bringing the patient under the influence of mercury. Thus, a very fine healthy young man, whom I attended some years ago, put himself under my care for chancre, after having neglected the disease for three weeks or more. Now, when a case of this kind, which has been allowed to run on unchecked, comes before you, you should not be too sanguine, or think that your patient will be perfectly safe under the non-mercurial treatment; for where chancres are neglected, secondary symptoms are very apt to occur. I treated him with purgatives, antimonials, rest, and low diet. He had no buboes, and got quickly well; but about five or six weeks afterwards he was seized with symptoms of fever, accompanied by acute pains of the joints, and two days afterwards got venereal eruption and sore throat. He had in fact all the symptoms of venereal exanthematous fever, and his skin became covered with blotches —the character of which could not be mistaken. They were neither papulæ, pustules, nor tubercles, but true venereal blotches, terminating in scaly scurf. I gave him tartar emetic, followed by vegetable alteratives, and he got better. He continued well for about a fortnight or three weeks, and then another eruption broke out, attended with pains and fever as before. The non-mercurial plan was tried again, and was again followed by the same apparent success; the eruption faded, and his throat got better. He then took lodgings in the country for the benefit of change of air, but while there was attacked a third time more severely than before. He had fever, eruption, and sore throat, and, in addition to these, periostitis and nodes; he also became weak and emaciated. Under these circumstances I prescribed calomel and mercurial ointment, until his mouth became sore. His symptoms all gradually disappeared, and he has had no return of the disease. In this gentleman the greatest attention was paid to diet, confinement to the house, and every circumstance which could favour the success of the non-mercurial plan. The patient's constitution was excellent, and free from any scrofulous taint, and yet the syphilitic poison seemed to be rapidly undermining his strength, and the disease acquired fresh force from time, instead of growing less violent; in fact, its progress was so alarming that mercury could be no longer with

ety withheld. A very moderate course of mercury, managed
as to keep his mouth tender for six weeks, thoroughly and
rmanently cured him.

Now, to what conclusion does all this lead? Simply to this,
d I believe it is the conclusion to which all rational men have
me, that although there are many cases of syphilis which can
cured without mercury, there are others in which its employ-
ent is indispensable.

In the two cases which I have just related, the results were
ry dissimilar. In the first, a case which had been pronounced
stinctly venereal by some of our most distinguished surgeons,
d not to be cured without mercury, the non-mercurial treat-
ent proved quite efficacious; the man was readily cured, and
d no return of his disease. The other case, which you would
ve regarded as most favourably circumstanced for getting well
thout mercury, had quite an opposite result; the disease
turned again and again, and did not yield completely until the
stem had been brought under the mercurial influence. Hence
u perceive the necessity of avoiding extreme opinions, or
ming to any general conclusions as to the treatment of
philis.

The inferences which my experience has led me to draw on the
bject are, that many cases of syphilis—indeed a great majority
cases of primary sores—may be cured without mercury, if
eated at once and properly.

After chancres have existed for some time, the chances of
condary symptoms are greatly increased, and mercury in such
ses will be often required; but it should be used with caution,
d moderately. Were I to speak for myself, I would say that,
a general rule, I prefer the non-mercurial plan in the treat-
ent of primary chancres, particularly if seen at the commence-
ent, and where they appear in persons of a delicate and
rofulous habit. I think at least you will not be wrong in
ving many cases of chancre a trial, and see whether you can
re them without mercury. If secondary symptoms appear, you
ve still a resource in mercury; the patient's constitution is
impaired, and the disease is still amenable to treatment. If
u treat your patient properly, he has many chances in his
vour; and if he gets secondary symptoms, mercury will still
t favourably on his system. The rational practitioner is

neither a mercurialist nor a non-mercurialist; he acts according to the state and peculiar exigencies of each case, and selects his plan of treatment according to the form, condition, and duration of the disease, as well as the constitution of the patient. If the chancres be of a mild and what may be termed indolent character, the application of nitrate of silver at an early period, combined with rest, low diet, aperients, and, if necessary, vegetable alteratives, will complete the cure. If attended with inflammatory symptoms, a vigorous adoption of the antiphlogistic plan will be indispensable, and the use of caustic applications must be deferred until the symptoms of inflammatory action are abated.

Whenever you get a chancre in its commencing period to treat, try the antiphlogistic and non-mercurial plans, and if your patient improve, persevere; but if there be no amendment, you may have recourse to the cautious exhibition of mercury. I say cautious, for in some constitutions you cannot be too careful in the administration of this remedy. The consequences which have followed from the injudicious use of mercury have been often and strongly depicted, but not in colours too strong for truth; the lamentable results which have attended its abuse rank among the greatest opprobria of medicine.

In Johnson's *General History of Pyrates*—a most curious book, published in 1725, and from which Sir Walter Scott has borrowed some of his best traits of nautical character—we find a passage proving the abuses of mercury were great at that period, and that even then facts were not wanting to show that this mineral was not indispensably necessary for the cure of syphilis. Talking of the Brazils, our author remarks: "The generality of both sexes are touched with venereal taints, without so much as one surgeon among them, or any one skilled in Physick, to cure or palliate the progressive mischief. The only person pretending that way is an Irish *Father* or Priest, whose knowledge is all comprehended in the virtues of two or three simples, and those, with the salubrity of the air and temperance, is what they depend upon for subduing the worst of malignity; and it may not be unworthy to notice, that though few are exempted from the misfortune of a running, eruption, or the like, yet I could hear of none precipitated into those deplorable circumstances we see common in unskilful mercurial processes."

Who can read without shuddering the long detail of misery nflicted on unfortunate venereal patients in the time of our predecessors ?—the exhausted salivations—the inveterate nodes —the frightful caries and sloughing—the emaciation—the hectic —the rapid or lingering, but ever fatal phthisis. Hundreds of victims, whose slight primary symptoms might have been successfully treated without a single grain of mercury, have had their constitutions gradually broken down, until at length scrofula became fully developed, and was quickly followed by its attendant, tubercular consumption.

Thanks to the exertions and labours of the army surgeons, we no longer behold the same indiscriminate exhibition of mercury, or the same wicked tampering with human life. The evils which have flowed from the abuse of mercury are greatly diminished, but still not sufficiently exploded from British practice. Notwithstanding all that has been said and done, a good deal still remains to be accomplished before the treatment of syphilis can be said to be placed on a solid and rational basis. I am not among those who contend that you should never use mercury. On the contrary, I think there are cases in which you an employ it to great advantage—in fact, where its employment s indispensable. But I would have you always to act with aution. In treating cases of primary or secondary symptoms which have existed for some time, and where the patient has been taking mercury, it is hard to unravel the perplexities which urround the case, and ascertain whether the mercury has been properly administered or not.

Where a patient labouring under syphilis has been salivated without being improved, one of two things must be inferred— either that the mineral has had no effect on the disease, or hat it has an injurious effect on the constitution. The great point to arrive at in the treatment of syphilis is to make the mercury act on the disease, and not on the constitution. This I have often endeavoured to impress on you. I will venture to say, hat I would engage to give a patient labouring under primary symptoms any quantity of mercury without producing a favourable effect on the disease or doing him any good. I would engage to salivate a man affected with sore throat, and yet leave him as bad or even worse than ever. I have witnessed this occurrence over and over again, and have laid it down to myself as a proposition, that venereal may be treated with mercury to the fullest extent without being cured.

Syphilis and mercury are not like two opposite forces—not like an acid and an alkali—so that by putting them together you are sure to neutralize them. No. It is a melancholy fact, but true, that the constitution may be impregnated with both at the same time. Some time ago a gentleman's coachman was admitted into Sir Patrick Dun's Hospital. He got primary symptoms, for which he took mercury; but being of active habits, and unwilling to quit his employment, he remained with his master, whom he was frequently obliged to attend at night. In this way he was often exposed to wet and cold, and used to take whisky with a view of protecting himself. The consequence was that eight weeks afterwards he came into Sir Patrick Dun's Hospital, with his mouth sore and fully salivated, but labouring under bad sore throat and extensive eruption. In adverting to his case before the class, I said: this appears to be a very bad specimen of the mercurial treatment, but you are not to conclude from what you see that mercury will not cure the disease. We will keep him in hospital, give him mild aperients, light nutritious diet, and sarsaparilla, and when we have removed the bad effects of mercury on his constitution, we will proceed to administer it again, but in such a way as to act on the disease, and not on his general health. About three or four weeks afterwards, the man was so much improved that we were able to put him again under a mild course of mercury, and succeeded in eradicating every symptom of the disease. Although a patient has got worse under the use of mercury, you should not conclude that it is incapable of curing the disease; it may have been administered improperly; and under such circumstances, I tell you again, no good can be expected from it. In such cases, the morbid action of mercury must be allowed to pass off completely before we have recourse to the mineral again; and if this be done with circumspection and care, the best and most favourable results may be expected. I agree perfectly with the judicious observations put forward on this subject by Dr. Lendrick, and I would strongly recommend every gentleman present to read his excellent observations published in the 11th, 12th, and 17th volumes of the *Dublin Medical Journal.*

As in many acute diseases, particularly those of the class

Exanthemata, so in syphilis you may have great variety in the symptoms. Some of them will be faintly shadowed out, or altogether absent, while others may manifest a remarkable prominence. In measles you may have the eruption without the catarrhal symptoms; in scarlatina, the sore throat without the eruption; or, what is still more curious, the desquamation and dropsy without any apparent preceding symptoms. So also in syphilis, in which you may have chancre without bubo, sore throat without eruption, or periostitis without any well-marked appearance of symptoms which usually precede in the order of time. You are not to expect that the disease will always appear in the form laid down by the great John Hunter, or that the symptoms will pursue the precise order marked out by him.

As in an acute disease, where not merely a single symptom, but even whole groups of symptoms may be absent, so, in many forms of chronic disease, some of the characteristic marks will be occasionally wanting. There is much variety in the forms, intensity, complexion, and duration of chronic diseases, and particularly with regard to those which arise from animal poisons. Scarlatina, typhus, measles, and small-pox produce very different mpressions on different constitutions—operating on some mildly and favourably, on others with extreme intensity. The same variety is seen in the constitutional symptoms produced by syphilis—in some they are slight and chronic, in others acute and violent. In fact, syphilis is so variable a disease, that every reflecting and experienced observer will be led to the conclusion hat it must require a mixed and varied treatment, and that its reatment cannot be based on any general code of laws as laid down by mercurialists or non-mercurialists. By acting in this way, you will avoid both extremes, and pursue a wiser and a better course.

The following observations, with which I have been favoured by Dr. Tuohill, are worthy of your careful attention. They refer to the occurrence of phagedænic ulceration, and its treatment with and without mercury. He also furnished me with the particulars of two highly illustrative cases. In one case the disease had lasted for nearly three years, and eventually yielded to the external application of belladonna, combined with the nternal use of creosote. In the second, mercury succeeded in the end, though at an early stage of the illness it proved an utter failure.

"Whether," says he, "that peculiar form of the venereal disease, commonly called 'the Phagedænic,' be the result of a distinct morbid poison, or a mere modification of what we more commonly meet in the course of practice, there can be no doubt that it is both a very formidable and a very unmanageable affection. This observation applies equally to the constitutional as well as to the local symptoms, in whatever relation the one may be supposed to stand towards the other. Though much difference of opinion may appear to exist respecting its precise nature, very little can be discovered in the consideration of those principles of treatment that are deemed fittest for adoption. All men of experience are agreed on the necessity of checking the ulcerative process, and fortifying, or at least supporting, the bodily health —indications which it is usual to attempt accomplishing by those external applications comprehended under the class of sedatives, stimulants, escharotics, and (save in the existence of vascular excitement of the system generally) the internal use of sarsaparilla, nitric acid, the various preparations of iodine, bark, iron, &c., with such directions as to climate, diet, and regimen as circumstances may demand. The signal indifference which phagedænic ulceration frequently exhibits to the influence of so many and such valuable remedial means, would go far in showing either that they are badly adapted towards the promotion of a cure, or that the disease is of such a nature that *time* must constitute an essential element for its removal out of the system. The latter idea may be sustainable, whether we conceive that in the long run the resources of the constitution alone have the power of neutralizing the innate virulence of the disease, or that, after running its natural course, it becomes so mild as to enter on or approach to a spontaneous cure, requiring but little if any assistance from mercury. Whatever reputation mercury may have deserved in other forms of the venereal disease, in this at least it can lay claim to little. It is not its negative so much as its positive powers that disentitle it to the character of a remedial agent. The serious mischief which even a moderate use of the remedy so frequently entails, both on the constitution and on the local symptoms, would seem to justify its rejection altogether. Still, strange though it may appear, there are occasions where its beneficial effects have been most surprising, that is, so far as the accomplishment of a perfect and permanent cure, under circumstances otherwise hopeless, would warrant the expression. It is a matter of much regret, however, that we have no systematic arrangement or compilation of such cases—no faithful record of the precise circumstances under which mercury has proved so successful when all other means failed. The statements of medical men on this head are vague, general, and even contradictory. No special rules, as a guide to the practitioner in any given case, are laid down. Some are of opinion that the most seasonable period for a trial of mercury is when the constitution has rallied from the sympathetic effects of the local disease. Others look upon it in the light of a dangerous experinent—a kind of *dernier ressort*—admissible only in extreme ases, when the ulceration is rapidly spreading despite of all ttempts to arrest its progress. Others, again, say that mercury nay be given with advantage in small doses as an alterative, ut they tell you to watch and wait till the ulcerative process hall have assumed a chronic form, resembling in features and omplexion an indolent ulcer.

The circumstances which induced Dr. Tuohill to have recourse gain to mercury in the second case, and which, he thinks, also ndicate the administration of mercury in phagedæna, were—a change in the configuration of the ulcer from that of the rdinary crescentic to somewhat of an oblong shape; the want f distinction into convex and concave edges, and the absence of ngular sharpness at either extremity; more consistency in the ischarge, with a tendency to scab; the absence of fissures or allous granulations on the surface, and the complete disppearance of that peculiar granular hardness and lividity which ere all along observable close to the convex margin of the lcer."

There is another point to which I shall direct your attention efore I conclude. It is of great importance, in the treatment f venereal affections, to bear in mind that there are other oisons capable of producing an eruption similar to the syphilitic. n a previous lecture I endeavoured to show that, in some eranged states of the constitution, the human body is capable of enerating an animal poison within itself, one of the characters f which is a more or less general cutaneous eruption. I have also shown that deranged local action of a part of the body may be followed by inflammation, and the formation of matter capable of infecting the whole constitution. I have more than once, while going round the wards, been struck with the appearance of a sore of this description, and, on stripping the patient, found some of Mr. Colles' pustules on the skin.

Some time ago a young man came into this hospital with gonorrhœa and phymosis; he was unable to draw back the prepuce, and the consequence was, that the extensively ulcerated glans lay constantly bathed in gonorrhœal matter. Shortly after admission his skin became covered with an extensive papular or papulo-pustular eruption, which was looked upon by many as true venereal. He also became emaciated, and sore throat, very closely resembling syphilitic sore throat, made its appearance. The prepuce having been divided, he was treated with small doses of arsenic, mild nutritious diet, rest, and lotions of sulphate of zinc, and recovered completely.

A case still more curious occurred some time since. A gentleman, one of the pupils, cut his finger while dissecting. The wound was followed some time after by a suppurating tumor resembling a whitlow, which lasted for a long time, and finally generated a poison which produced sore throat and a cutaneous eruption; the latter of such an obstinate character that, after trying many remedies, he was obliged to have recourse to mercury. These facts, coupled with others of a similar tendency, show that venereal symptoms present a considerable variety as to their number, order, form, duration, and curability by mercury; consequently, it often becomes a matter of difficulty to distinguish the true nature of the disease, and separate it from other influences by which it may be modified. Hence, too, the caution with which we should proceed to subject a patient to a course of mercury.

One word now with respect to the treatment of chancres. I think it is a matter of the utmost importance to the medical man, as well as to the patient, that chancres should be seen and treated in the very commencement, that is, from two to four or six days after their appearance. Like the effects of many animal poisons, they are at first merely a local disease, and seldom affect the constitution until they have been for some time in existence. In the beginning they produce local irritation, but if neglected may give rise to constitutional affection. Hence the importance of being treated from the commencement; and to this circumstance I attribute the chief part of the success that attended Dr. Roe's practice, and the rare occurrence of secondary symptoms among the men intrusted to his care. I feel convinced that chancre, if seen shortly after its appearance, may, in eight cases out of ten, be treated safely and successfully without a single grain of mercury.

There are very few animal poisons which may not be arrested and destroyed at the point of inoculation if treated properly. I feel fully convinced that if you were to take a vaccine vesicle, and destroy it with nitrate of silver shortly after it has made its appearance, the virus would not affect the constitution, and that the child would not be protected from the danger of infection from small-pox. Burn the whole vesicle, it will heal up like any other part, and the child will not be safe from infection. You may smother the disease while it is merely local, and before the constitution is affected. Such, at least, appears to be the case with many animal poisons, and in particular with regard to the venereal.

As it is extremely desirable to arrest the local progress of chancre, many methods of accomplishing this object have been devised, among which none appears more certain or efficacious than the application of escharotics. If the disease be detected in ts very early stage, before the *matrix* pimple has burst, or immediately after that event, the destruction of the local disease proves, in the great majority of cases, a perfect protection against constitutional sequelæ. When the chancrous ulceration has once commenced, and has been allowed to remain unchecked for one, or two, or three days, it is still most desirable to extirpate the local malady, and the result will generally be successful. The chance of protecting the constitution diminishes in proportion as the operation is deferred; but we want data to enable us to calculate at what period it ceases to be at all protective; that period probably varies in different cases.

Be this as it may, it is an essential point in practice to get rid of the primary sore as speedily as possible; how it is best to effect this object is a subject which requires a few remarks. The usual mode of treating small sores, whose diameter does not exceed that of a common stick of lunar caustic, is to apply the latter in substance, so as to produce a small eschar of the required size; this method seldom fails, but is attended with the disadvantage that it often gives rise to sympathetic bubo, as the caustic is not unfrequently used with too little caution. I have accordingly given up the use of the solid caustic, except where the pimple or ulcer is very small, requiring merely a slight touch of the pointed pencil. Many practitioners lean too heavily on the pencil during its application, and keep it too long applied, and consequently the resulting inflammation and eschar are far more considerable than necessary, and are also more likely to produce bubo.

When the sore is so large that the diameter of its surface equals or nearly equals a line, it is already too extensive for the application of the solid caustic, without incurring the risk of a bubo. Under these circumstances, or, *a fortiori*, when the sore is still larger, I use the following method:—Provide yourself with a common-sized, nicely-pointed camel's-hair pencil, and a solution of lunar caustic, twenty grains to the ounce. Pour a drop or two on the cover of a book, or on the table, and, dipping the brush in a basin of water, cleanse the surface of the sore with it. Dry the sore then completely with a piece of lint, and, rinsing the brush, squeeze out the chief part of the water, and, pointing the brush, you may then dip the extreme point of it in the drop of caustic solution, so as to take up the smallest possible quantity of fluid, which you may then apply to the centre of the sore. When it has done acting, we may readily judge, by the appearance of the surface, whether enough has been applied, for the whole surface must be whitened; but it is not, as is usually imagined, proper to burn out the edges. It may be necessary to dip the end of the brush in the solution, and apply it to the sore a second or even a third time, pausing to observe the effects of such application. By proceeding thus, we destroy the diseased surface, and do not produce any inflammation likely to give rise to bubo.

Some practitioners are much bolder, and use the solid caustic much more freely, desiring the patient to keep the part poulticed; but their mode of proceeding is very objectionable. When the solution has been properly and cautiously applied, no dressing to the part is required, except a bit of lint or charpie. In some cases it is better to use as an escharotic the nitrate of copper, ch may be employed in the form of concentrated solution, ined by allowing the solid salt to deliquesce. Here the el's-hair pencil and the same precautions are required.

fter cauterizing the surface of a chancre, I have frequently ied a little of the fur or felt of a hat to the ulcer, and cted the patient not to remove it, if it adhered to the surface, ch it will sometimes do, forming a scab that will not drop off l the sore is quite healed. Although we may not have urse to applications decidedly escharotic (which is the surer), yet I think the early and diligent use of stimulating ons of lead, sulphate of copper, and sulphate of zinc washes, es to a certain degree to protect the constitution. The fact hat chancres so treated in the beginning, and thus altered, caused to assume a healing process, cease to be as likely to ct the system either of the individual himself, or of females whom he may have connexion. A similar remark applies gonorrhœa; an astringent injection, used several times nediately before connexion, will, for the time, so alter the ure of the urethral secretion that it will cease to be infecs, although it may become so in half an hour or an hour rwards.

LECTURE LXVI.

SYPHILIS CONCLUDED.—USE AND ABUSE OF MERCURY.—PTYALISM. SECONDARY SYMPTOMS.

I HAVE already stated that you may give mercury for syphilis in such an injudicious way, that all the efforts of the medicine are expended not on the disease, which it is meant to cure, but on the constitution of the patient, which it injures. This proposition, the truth of which has been long recognized, cannot be impressed too strongly or too clearly on your minds; for on accurately comprehending its scope and meaning will depend your success in the diagnosis and treatment of difficult cases. Nor is this peculiar to mercury when used in the venereal disease, for the same mineral may be so mismanaged in other diseases also, as to produce no beneficial effect, although it may be the very best remedy that can be administered in them, when judiciously prescribed. Thus, give calomel in considerable and repeated doses to a dysenteric patient, and allow him at the same time to use cold and acid drinks, and a mixed diet with vegetables, and you will render the disease worse instead of better, especially if the skin be freely exposed to alternations of temperature and cold air.

Again, when a violent pneumonia has hepatized a considerable portion of the lung, no remedy exceeds mercury in value; but it may nevertheless, and I regret to say not unfrequently is, given under such circumstances without the necessary precautions, and consequently rather injures than serves the sick man. The same observation applies to mercury when ordered in pleurisy or peritonitis, and is remarkably exemplified in arthritis and sciatica: in the latter disease, unless proper precautions as to temperature and rest are taken when giving calomel, you will be sure to salivate without obtaining any relief of suffering.

If opium be administered without tact, at wrong times, and in wrong doses, it often fails to procure sleep, and causes watchfulness; and so it is with all our remedies; they only produce a curative effect when properly exhibited. Certain states of the system, too, prevent the kind constitutional action of mercury. Suppuration of the liver renders it almost impossible to affect the mouth, as has been remarked by Annesley and Marshall. When the constitution is eminently scrofulous, mercury rapidly gives rise to a new group of bad symptoms, and fails to cure the venereal cachexy for which it was given.

The presence of the scorbutic diathesis—and it often may be associated with syphilis—renders the use of mercury unsafe and even injurious; even in healthy constitutions the favourable influence of mercury on the venereal symptoms may be interrupted or destroyed by strong mental emotions, excessive fatigue, bodily labour (hence the difficulty of getting mercury to act well on day-labourers and artisans, while employed), irregularity of diet, intemperance, &c., &c.

In all cases where any of these causes operate on the system, it is extremely difficult to prevent the mercury from going astray (as it is termed), that is, injuring the constitution without serving the disease.

The following example proves the truth of this observation, and shows that a very great difference of opinion exists even amongst the most determined mercurialists, respecting the propriety of giving and withholding mercury in certain cases.

Some years ago I was called to see a young gentleman who had recently contracted a chancre. His constitution was perfectly good, and I proposed to cure the sore without mercury. To this he would not consent, and consequently I thought it right to call in the aid of the family medical attendant. He advised the use of mercury, and we prescribed five grains of blue pill three times a day, after a few days' preparation by means of confinement, rest, and low diet. By a mistake on the part of the patient's brother, he got five grains of calomel three times a day, instead of five grains of blue pill. A rapid improvement in the chancre took place, and on the fourth day we found the sore nearly healed, but the mouth much more affected than we had anticipated. He had then taken one drachm of calomel. That evening some young friends came to his room, and persuaded him to join them in a supper of oysters, punch, &c. In the night a most violent attack of mercurial cholera, with colic, vomiting, and purging, came on, and reduced him to a state of great debility.

The mistake as to the calomel was now discovered; and in consultation on the following day, his mouth being very sore, and the chancre spreading, it was agreed to use soothing measures, local and constitutional. At the end of a week we found the sore on the prepuce perfectly stationary; it seemed neither inclined to spread nor heal, while his mouth was still a little sore, and his breath fœtid. My colleague now advised the resumption of mercury, which was accordingly used both internally and externally. In about ten days, during which time he scrupulously followed our directions, his system was again brought under the active influence of mercury, but still the sore was stationary. My colleague still wished to go on with the mercury; I dissented, and another consultant was called in. This gentleman, although a mercurialist, thought mercury here inapplicable, and we therefore left it off. I now touched the sore with the nitrate of copper, and, applying to its surface some felt of hat, a scab was formed, which adhered until the sore completely healed. Several years have elapsed, and the patient continues well.

Here, then, was a case where two mercurialists of great experience differed as to the expediency of giving mercury. As authorities they might be deemed equal, and yet, at a particular crisis, their opinions were diametrically opposed—an occurrence alone explicable on the grounds that the principles which guide mercurialists are not so precise and certain as they profess them to be. Indeed, on many occasions, I have found the greatest discrepancy of opinion between mercurialists as to the length of time during which mercury ought to be continued after it had caused a primary sore to heal; in the same case one practitioner advising a mercurial course twice as long as that recommended by another. Occurrences such as these demonstrate that much still remains to be done in this department of medical science, and such errors should teach us all—*for we all make them*—the necessity of acknowledging that, as yet, our opinions upon this subject are based upon no very firm grounds; and that consequently we should be tolerant of the opinions of others when they differ from us either in theory or practice. Toleration such as I have recommended is but too rare, and many seem incapable of arguing or lecturing calmly and philosophically on the subject of the treatment of venereal.

Now, in the case above related, it appears to me that the mercurialists forgot some of the rules laid down by the advocates of mercury. Let us reconsider it for a moment: a venereal sore is rapidly healing under the influence of fifteen grains of calomel daily; had a proper diet been observed, another day would have completely healed the sore, but unluckily the patient commits a gross indiscretion of diet, and suddenly after that the sore spreads beyond its original dimensions, and continues obstinately to refuse to heal again, in spite of the patient's ill-advised perseverance in the further use of mercury. Under these or similar circumstances, the rule laid down by Matthias becomes applicable, viz., that when a sore becomes stationary (having been previously healing), or gets worse under the use of mercury, it is injurious to exhibit it any longer; it must be laid aside until those causes which deranged the constitution and impeded the proper action of the mercury have ceased to exist. But to prove still further that the most strenuous supporters of the mercurial system are liable to errors—to grievous errors—I shall give you the following case, on the accuracy of the particulars of which you may implicitly rely. The practitioner who conducted the treatment is considered to be a most skilful mercurialist, and most experienced in the management of syphilis. When the rules that should guide us in the exhibition of mercury prove so fallacious in such hands, how much more likely are they to fail with the young and inexperienced!

Mr. ——, a strong, healthy young man, got a small pimple and sore on the penis after connexion, 25th November, 1836. He consulted a medical friend on the very day the pimple came out: he was assured it was not venereal, and was desired to return on the fifth day; then, also, the same opinion was repeated. Suspicious of its accuracy, he went to another practitioner, who put him on alterative doses of mercury; Plummer's pill was continued for ten days without any soreness of mouth; it was hen discontinued, as the primary symptoms had healed. He remained quite well until February, 1837, in the middle of which month three or four large tubercular pimples slowly formed and suppurated on the scalp, neck, and face. His general health, however, appeared quite good. On the 2nd of March, 1837, his throat felt a little sore, and he began to take sarsaparilla decoction; otherwise his health continued good. On the 16th of

March, however, a copper-coloured eruption, consisting of blotches variously sized and very numerous came out on the body and limbs. The eruption was unattended with fever.

He now consulted a third practitioner, who ordered him to rub in ʒss. of strong mercurial ointment twice daily. His mouth became very sore on the fifth day, when the rubbings were discontinued for a few days, but were then resumed and continued for seven weeks longer, during which time he confined himself to his room, and was very careful as to his diet. On the 11th of May the frictions were discontinued, as Mr. —— pronounced him cured and safe from all danger of relapse. Observe that his mouth had been decidedly affected all this time; profuse salivation had not been maintained, but his gums were tender, and a slight salivation which arose on the fifth day had subsided.

The patient took great care of his health during the summer and autumn. He continued quite well until the 9th of September, when he got an ulcer in his throat. He again applied to Mr. ——, who at first insisted (in self-defence, no doubt) that the sore throat must have been occasioned by new infection. This the patient truly denied; on examining the ulcer, Mr. — asserted that it arose from the original syphilitic infection, and he immediately put him on the daily use of a quarter of a grain of corrosive sublimate. He touched the ulcer several times with nitrate of silver in solution ; the throat got well on the seventh day, but by way of securing the constitution the quarter-grain daily dose of corrosive sublimate was continued.

On the 1st of January, 1838, another ulcer formed in the throat ! Mr.—— now increased the corrosive sublimate to half a grain daily, touched the ulcers several days in succession, twice daily, with butter of antimony; after some days only once daily.

On the 10th of January the ulcer was healed. The use of the concentrated syrup of sarsaparilla was added, and the half grain of corrosive sublimate was continued until Friday, 2nd March.

I need scarcely record that he was then in an extremely debilitated state, for the length of time he had been taking corrosive sublimate had been enough to impair the power of his stomach, so that for two months he had lost all appetite, and he

likewise slightly jaundiced. By the way, when mercury has
n used by a patient to excess, jaundice is by no means an
ommon consequence—a fact we had often occasion to verify
he Lock Hospital twenty years ago.

he above case is instructive likewise, proving, as it does, that
same venereal poison in the same constitution may give rise
cutaneous affections of different species, for it here at first
duced tubercular pustules, and at a subsequent period copper-
oured blotches.

When this patient was placed under my care, I looked on him
a victim to a plan of treatment injudiciously persevered in for
nths after mercury was no longer necessary. Accordingly I
continued that mineral altogether, and the patient completely
overed. It is difficult to imagine what train of reasoning
ld have misled the practitioner in this case. But to return
the causes which impede or prevent the beneficial action of
rcury.

Every excess—everything, in fact, which injures the health of
ly or mind—will have a tendency to counteract the beneficial
cts of mercury on the disease. I think much mischief has
n done by the well-known assertion of John Hunter, that he
ld not see what harm a good dinner and a bottle of wine would
to a man taking mercury for chancre. I would not advise you
undertake to administer mercury in venereal cases unless the
ients are willing to submit to your directions, be careful in
tters of diet, avoid intemperance, and confine themselves to
, or at least to their rooms.

t is the subjection to strict regimen, quietude, and confine-
nt which seems to act so favourably in the case of soldiers.
ey are confined to hospital, obliged to keep their beds or rooms,
rived of all dietetic stimulants, and removed from all causes
mental emotion, and hence it is that their chancres heal so
idly. Mercury will seldom do much good unless taken under
per regulations. It will affect the constitution variously, but
general injuriously. I have already mentioned one case in
ich it acted injuriously, in consequence of indulgence: allow
to give another case of the kind arising from a different class
causes. A young gentleman at college, who was under my
e for chancre, was taking mercury for some time during the
nmer season. He had taken some blue pill with benefit, and

thinking if one or two pills were good, a large number would be better, he took them much oftener than he was ordered.

An election took place at the college; he went to see it, became actively engaged in it, and continued so until a late hour in the afternoon. The weather happened to be extremely warm, so as to oblige him to change his linen three times during the day; but the excitement produced by the election was such that he forgot the condition he was in, exposed himself to a vast deal of fatigue, and remained fasting the whole day. In the evening he went home, and took a large glass of wine. In the course of a few minutes his head was violently affected, he became quite delirious, and continued alarmingly so for twelve or fourteen hours. Here you perceive the mercury affected the head, producing violent delirium. In other cases it will give rise to coma. In fact, it would be difficult to enumerate the various modes in which it may act injuriously when administered without caution, or when the patient is exposed to disturbing influences during a mercurial course.

You will recollect that, some time ago, in speaking of double or complex diseases, I brought forward several facts in support of the hypothesis that persons may labour under several diseases at the same time, all of which may combine to form an impaired state of the general system. In confirmation of this assertion, it appears that mercury may be employed for the treatment of syphilis, so as not only to lèave the disease untouched, but also to superinduce mercurial cachexy, and even scrofula, and in this state you may have eruptions of various kinds. This is one of the worst forms of complex disease that comes under the notice of the practical physician. It was this form of disease which exhibited so many melancholy spectacles in the Lock Hospital some years ago; patients were seen labouring under all the horrible symptoms which combined syphilitic, scrofulous, and mercurial cachexies—the glands, skin, throat, bones, mucous, synovial, and fibrous tissues were all simultaneously affected; in fact, almost every tissue in the body was more or less engaged, and the patients died terrible examples of the frightful ravages of complicated disease.

In endeavouring, therefore, to analyse the nature and character of syphilis, you must always hold one great object in view, viz., to ascertain as closely as possible the order of the symptoms

Let us, for example, take the case of the woman in the chronic ward who is at present labouring under nodes. The first object here is to inquire whether they are syphilitic or mercurial; and with this view it will be necessary to obtain an accurate history of her case—to ascertain the order of symptoms—how long and in what manner she used mercury—what relief she has obtained—and whether the symptoms of relapse have come on slowly and gradually, or rapidly and at once.

If a person labouring under a certain class of symptoms, primary or secondary, has used mercury until his mouth has been affected; and if, when he has reason to think himself cured, his mouth being still tender, or having been so lately; if such a person after exposure to cold gets a violent attack of pains, followed by periostitis, we may conclude that he has taken a sufficient quantity of mercury to cure his syphilis, and that his complaint is mercurial periostitis; for here you have a train of symptoms not referable to the original cause. This is a very common case, and you will see numerous instances of it in labourers, and persons who are exposed to atmospheric vicissitudes while taking mercury. You will find, on inquiry, that after they have been cured of the venereal symptoms, they have exposed themselves to cold while still under the influence of mercury, and have shortly afterwards been attacked with a new train of symptoms. In most cases the chances are that this sudden supervention of disease is not the effect of syphilis, but of mercury. An accurate analysis of the history of the case, and a careful observation of the new phenomena, are then the only guides we have to enable us to arrive at a just conclusion.

I stated in my last lecture that the mere fact of a considerable time having elapsed since the patient took mercury is no proof that the symptoms are not mercurial. I have over and over again met with cases of periostitis in persons who had been two, four, six, and even eight years without taking mercury. I was called the other day to see a lady whose mouth was sore, and her breath fœtid; in fact, who presented all the phenomena observed in cases of mercurial salivation; and yet it is now several years since she took mercury by the advice of an eminent Dublin physician. Still more recently I have witnessed the recurrence of mercurial ptyalism after two years in a gentleman who was salivated in the first instance by myself, and who had not in the interim taken a single grain of any preparation of mercury, not even an antibilious pill.

Now if so much time could have passed by, and yet one of the immediate effects of mercury be present, it is not improbable that some of its remote effects should appear after a lapse of time in which we would suppose that the mercury had been completely removed from the system. Many facts, however, can be adduced to show that some constitutions, when thoroughly affected by mercury, are apt to retain it for a very considerable time, and hence the practical physician is led to the reflection, that it should be used only in cases of necessity, and with all due discretion. Thus, in treating rheumatism, if you can cure by bleeding, leeching, tartar emetic, Dover's powder, and colchicum, you should not have recourse to mercury. The same observation will apply to the treatment of pneumonia, hepatitis, and many other forms of inflammation.

While speaking of ptyalism, I wish to mention the case of a middle-aged woman of delicate appearance, who applied to me for advice on the 26th of December last. She had laboured under a profuse and long-continued leucorrhœa, which ceased rather suddenly in the beginning of September, and was followed by a slight degree of anasarca. This disappeared under a course of diuretic and purgative medicines; but she remained in a debilitated state, and experienced much distress from irritability of stomach, and finally from obstinate retching. In October this symptom also suddenly subsided, and was succeeded by a remarkable and profuse salivation, which continued unabated notwithstanding the use of various purgatives, tonic and astringent medicines, gargles, &c.

In twenty-four hours she spits more than a pint and a half of fluid, consisting of a whitish, viscid mucus, secreted by the mucous membrane of the fauces and back of the pharynx, from whence it is thrown into the mouth by a *hawking*, renewed every two or three minutes, with scarcely an interruption either during the night or day, and rendering the patient truly miserable from want of sleep. The throat and fauces are pale, and their soft parts extremely flabby and relaxed; although there is a constant irritation in the throat, in consequence of the presence of an unnatural quantity of mucus, yet no soreness is felt, neither do the parts appear inflamed. The salivary glands are not concerned in the disease, and do not secrete more than the usual quantity of fluid. Her appetite is very bad, her skin dry, and she has a haggard, emaciated countenance.

The well-known good effects of opium in several diseases of increased secretion, diabetes, diarrhœa, and certain forms of dropsy, suggested to me the trial of this medicine in the apparently almost hopeless case I have related, and I accordingly ordered the patient one grain of opium every fourth hour. On the following day she returned to inform me that she had slept during the whole night, and on awaking had no return of the spitting. Her joy was great, and she and her friends considered the effect of the pills, in thus suddenly stopping the spitting, as most extraordinary; and I must confess that my surprise was almost equal to theirs. She then told me that several medical students who lived in her house, and who had witnessed the previous violence and obstinacy of her complaint, had been so much struck by its sudden cessation under the influence of the pills, that she was commissioned by them to inquire what I ordered. I mention this circumstance to show how very remarkable was the benefit she received from the opium.

The pills were continued for some days, when the quantity of opium was augmented on account of some recurrence of the spitting; unfortunately they induced constipation of bowels, and consequently she has been frequently obliged to leave them off; but she is, on the whole, much improved in health; and although she is still subject to the disease, its severity is comparatively trifling, and it uniformly disappears almost entirely when she has recourse to the use of mercury.

We sometimes meet with secondary symptoms concerning which we find a difficulty in deciding as to whether their origin is syphilitic or mercurial; of this we have now an example in the chronic ward. A man has been admitted with a peculiar ulceration affecting the fore-arm. I scarcely know what to call his disease; but though I am not able to give it a proper appellation, I think I can describe it with sufficient accuracy, and give you some practical hints respecting its mode of cure. You perceive, in the first place, that this man is much emaciated; you next find that he has not had syphilis for the last thirteen years; but that, two years ago, he was salivated in Stevens' Hospital for liver disease. After the use of mercury he never regained his former state of health; a cachectic condition of body ensued, and he remained wasted in flesh and reduced in strength. In this state of the system the present disease appeared. He first noticed one or two tumors under the skin, and you may have observed two of them at present on his body. One, two, or three of these appear at a time, increase in size, arrive at maturity, then begin to decline, and are succeeded by a new set.

They go through the following stages:—at first the tumor is small and circumscribed: it lies under the skin, without any attachment to it or the subjacent parts; you can roll the skin over it, and it over the parts beneath; and it appears to be a solid substance, perfectly insulated, and having no attachments either above or below. In this state it goes on until it grows to the size of a walnut or small apple. It now no longer preserves the rounded form which it exhibited before; the pressure of the surrounding parts, and particularly the contiguity of bone or fascia, causes it, as its size increases, to become flattened and irregular on its surface. This occurrence is followed by a change in its structure. It begins to soften in its centre, and a deposition of fluid takes place; the solid part is diminished while the fluid increases, and the whole substance is gradually converted into a mass of puriform fluid. In the meantime the integuments over this tumor become inflamed, contract an adhesion to its surface, and finally break.

The discharge of the confined matter is not here, as in case of abscess, succeeded by the healing process; the tumor is removed by ulceration, but it leaves behind an ulcer with an irritable surface, discharging an ill-conditioned puriform fluid, and covered with fungous granulations. The irritability of the surface of this ulcer is very considerable, but the surrounding integuments are very little inflamed; the skin presents very little redness, but the edges of the sore are undermined. It goes on until it has destroyed entirely the original texture of the tumor; and, when this is accomplished, it does not seem inclined to spread or travel to the neighbouring parts; the work of destruction was confined to the place where the tumor has been, and to the investing integuments and tissues. It then begins to heal in one part, and after some time disappears, leaving behind it a remarkable cicatrix.

When the healing process is set up, while the lump is small, he cicatrix is circular, and the skin smooth. But when it has ssumed a larger size, the cicatrix becomes irregular and uckered on its surface; and the new cuticle which is generated resents an irregularity in its colour, having scattered over it hin whitish portions, intermixed with vascular skin: and this s characteristic of the disease. In what particular is this disease emarkable? First, in the length of time which it takes in rriving at its stage of maturity. Sometimes this extends to ight, in other cases to twelve, and you will find instances in hich fifteen months will elapse from the time of its commence-ent until suppuration is established. It is also remarkable for e great pain which, after some time, is felt in the tumor, a ircumstance which depends on a process going on in the tumor self, and not in the surrounding integuments; for if you queeze one of these lumps, you will find it very painful, though t the same time the integuments over it are neither tender nor nflamed.

The last thing deserving of remark in this disease is, as has een noticed already, the absence of cutaneous inflammation. ow, with regard to the situation in which these lumps are ommonly observed, if you examine this man, you will find an pen ulcer on the outside of the fore-arm close to the ulna. You ay also perceive that he has several scars on his extremities nd body, all in the vicinity of bone. He has some along the ack, close to the spinous processes; one on the shoulder near e scapula; others on the lower extremities, still near bone. e has one lump, however, on the outside of the thigh, not actly contiguous to bone, but lying close to the fascia lata. he situation of this last lump would seem to point out its onnexion with node. I do not, however, look upon it as a node the fascia, because it can be rolled about over the fascia. It not originally connected with fascia, though it may, towards s termination, contract an adhesion to it. You are, therefore, look on it as an affection neither of bone nor of fascia.

The disease is to be recognized by its history and insulated evelopment in the subcutaneous areolar tissue; by its beginning a small, solid tumor, which after some time becomes painful, d which owes its size to a morbid growth rather than inflam-ation; by the length of time which takes place before it begins to suppurate; and by the cicatrix which it leaves behind. Now, with respect to the nature of this collection of matter, would you call it chronic abscess? No; there are some characters in which it differs from chronic abscess, though it appears to have some relations to chronic or scrofulous collections of matter. Thus you will find persons labouring under the scrofulous diathesis, or of a cachectic habit of body, get an abscess which may continue for some months, or even a year, without any redness of the integuments, increased heat, or even pain: in fact, without any more certain indication of the gradual accumulation of matter than that which this swelling affords. It is to tumors of this kind that the name of cold boil has been popularly given. This differs from the former disease in the absence of previous deposition, and in the formation, from the beginning, of puriform fluid; while the lumps in question begin in a solid state, increase, still solid, and thus exhibit characters different from chronic abscess, though, in the length of time that they take in arriving at maturity, and in giving rise to the formation of matter, they bear some resemblance to it.

They differ also in their mode of healing, and in the cicatrix which remains. Again, if you look to the state of constitution which we meet with in this disease, and observe what this man's habit of body is, you will find that it occurs in that cachectic state which frequently follows the use of mercury. It arises in a habit of body which mercurialization has depraved, and it is never known except in persons who have been using mercury. If, after two or three months, you cut into one of these tumors, you give no vent to matter, but your incision is followed by a copious flow of blood. These tumors are sometimes so painful as to require an incision, and this is occasionally attended with benefit. I do not know whether it is that the incision checks their growth, or that it produces a more rapid development of the ulcerative process. It is possible that we may be able to remove this disease entirely by excision, and that, when you discover one of these lumps in its first stage, before it has established any connexion with the neighbouring parts, you may cut it out with advantage. It appears to be perfectly insulated, the skin over it is perfectly sound and free from inflammation, and I can see no objection to excision.

Now, how would you treat this man? If you look into books, you will find the information they afford on this disease very scanty. Bear in mind the peculiar state of constitution produced in him by the use of mercury. On this consideration your treatment must depend; put your patient on a light and mild diet, and, if possible, send him to the country; the jusculum sarsaparillæ of the old authors will do him a great deal of service, and should be prescribed; nitric acid also exerts an influence which is almost specific in curing this disease, and may be given in large doses. Other medicines, such as arsenic, which I have employed in this man's case, and bark, will prove serviceable and facilitate the cure. You may have recourse to another thing: this I mention on the authority of Mr. Kirby, who has given me a great deal of information on this subject, and that is, when you have strengthened your patient's constitution by means of the above-mentioned, you may give mercury in mild alterative doses, and here you will derive very great benefit from De Velno's vegetable syrup. So much for constitutional treatment.

I trust, from the description I have given, that you all will be able to recognize the disease, and treat it properly. Recollect you are not to give mercury until your patient's health begins to improve. With respect to the local treatment of the ulcers which appear towards the termination of the disease, your practice is simple and obvious. There is no necessity for leeching the surrounding integuments; all you will have to attend to is the surface of the sore; apply to this red precipitate in powder, or black wash, or carrot poultices, and you will considerably accelerate its cure. There is no use either in leeching or blistering over the lumps before they break. You may leech or blister over them as much as you like; it will do no good; they are insulated parts that will not be affected by this treatment, and will continue to grow until they have attained a proper size.

We have also other similar diseases attendant on a broken state of the constitution, as rupia, a vesicular, and ecthyma, a pustular disease, in which, when the sores break, they give rise to ulcers with fungous granulations and unhealthy surfaces, and, after they heal up, present a cicatrix somewhat resembling that observed in this disease. There are other constitutional diseases also, such as yaws, which are attended with a peculiar affection of the skin. So that you perceive we have some persistent diseased states of the constitution, giving rise to chronic topical affections, which bear some analogy to the exanthemata; for, as in scarlatina we have fever with scarlet eruption, so in these instances we have a kind of slow fever giving rise to ecthyma, rupia, yaws, &c.

In a letter which I have received from Sir James Macgrigor, he informs me that mercury is very little used now in the army. There is no regiment or hospital from which it is wholly excluded; but it is administered with discretion, and only when the necessity of the case plainly requires its employment. I may observe, *en passant*, that you will find some excellent observations on mercurial remedies in the lectures of Dr. Sigmond, published in the *Lancet.*

There is one remark I wish to make with respect to mercurials, namely, that an undue preference is shown for some preparations to the exclusion of others. I think, for instance, that calomel is too often employed where other preparations would answer better, and that corrosive sublimate is too much neglected. I have witnessed its superiority to other preparations of mercury in many instances; and some practitioners prefer it in the treatment of many forms of secondary syphilis. Thus, in a patient labouring under secondary symptoms, after the fever is over, and the eruption begins to decline, corrosive sublimate may be used with great advantage. One-eighth of a grain may be given twice a-day, and every night the patient may rub in from a scruple to half a drachm of mercurial ointment. Under this treatment the disease is cured much more rapidly and effectually than if calomel, or blue pill, or mercurial inunction alone had been employed.

In throwing out these observations on the treatment of venereal, my object has not been to enter into specialities, but simply to furnish a few general rules for the guidance of persons engaged or about to be engaged in the treatment of one of the most important diseases in the whole nosology. You will find any additional information you want in books. An immense quantity of valuable information has been collected by the army surgeons; and, thanks to the indefatigable industry of Sir James Macgrigor, the profession and the public are now able to avail themselves of these valuable contributions to medical science. You will also find much valuable matter in the *Medico-Chirurgical*

Review, which contains an able analysis of Mr. Colles' work on Venereal.

Ricord's work has been very ably reviewed in the *Edinburgh Medical and Surgical Journal* for July, 1838; and to that periodical I must refer you for details, merely remarking that no modern author has done more than Ricord, by contributing materials calculated to decide many important controverted questions.

Fricke remarks that although affections of the bone and periosteum are a very frequent effect of the syphilitic poison *per se*, yet caries and destruction of the bone are seldom or never observed except when mercury has been administered. This observation is, generally speaking, correct; but, nevertheless, it requires some limitation; for I have seen examples of caries of bone in the venereal disease where not a grain of mercury has been taken. In the cases I allude to, the scrofulous diathesis was pre-eminently marked, and the affection of the bones, which the venereal poison exhibited, immediately degenerated from its usual course, and assumed all the characters of scrofulous disease. In both instances, destruction of the nasal bones, and consequent sinking of the bridge of the nose, occurred—a deformity occasionally of simple scrofulous origin.

From an analysis of Pirogoff's *Surgical Annals*, published in Oppenheim's Journal for September, 1838, it appears that mercury is very seldom employed at Dorpat for the cure of venereal, and yet Dorpat is remarkable for the number and severity of syphilitic cases—a circumstance partly attributable to the absence of medical surveillance over the women of the town, and partly to the apathy, carelessness, and filth of the lower orders.

Pirogoff's general mode of treatment is non-mercurial; and he maintains that relapses are less frequent and less violent than when mercury is employed as the general means of cure. It is worthy of remark that a peculiar consequence of phymosis, or its causes, is frequently observed at both Dorpat and St. Petersburg, and which consists in the transformation of the inner layer of the prepuce into firm cartilage. There is no remedy for this but circumcision. This change into cartilage is always produced by diseases which, producing phymosis, at the same time give rise to a long-continued irritation and inflammation of the inner surface of the foreskin, attended with an increased secretion from the latter. Under such circumstances the surface of the glans and its covering prepuce pour forth secretions of an offensive nature, which find a very difficult vent, and are, besides, rendered more acrid by an occasional admixture of urine, and by the impossibility of thoroughly cleansing the parts.

Before concluding, I have but a few more observations to make on the treatment of syphilis. Since I first delivered lectures on this disease, I have made some experiments on the comparative value of lunar caustic and sulphate of copper in *healing* chancres; and I am fully convinced that for this purpose we should prefer the latter. The great utility of lunar caustic in destroying the surface of the sore, in the first instance, is unquestionable; but after this first application, I think we will succeed in rapidly healing the ulcer more effectually by sulphate of copper, which may be used either in substance or in solution of various strength, after the manner recommended for the nitrate-of-silver lotions. When the ulcer has assumed a chronic appearance, with thickened, elevated, and, as we frequently see, everted edges, I know of no escharotic more useful in levelling the edges and improving the surface of the sore, than the free application of this remedy in substance. I am also perfectly satisfied that the sulphate of copper produces much less irritation than the other, and that buboes more rarely follow its employment.

There is one point more to which I am very anxious to direct attention, as I am certain many errors are committed by a want of knowledge on the subject. I have frequently had under my care patients of a scrofulous constitution, affected with primary sores, which, for obvious reasons, were treated on the non-mercurial plan, and readily healed without bubo or any other bad symptom. Some of these patients were afterwards attacked with periostitis, produced by cold, wet, injury, or any other cause, and though they had never taken a grain of mercury, and were free from any other symptom resembling syphilis, have been pronounced to labour under secondaries by other practitioners to whom they have applied for advice. This view seemed in many instances extremely probable, from the fact that soon after the periostitis was established, nocturnal exacerbations, sweating, and emaciation rapidly ensued.

Such cases are by no means rare, and require the greatest discrimination; for if mercury be resorted to with the impression that the patient labours under secondary syphilis, the most alarming consequences are sure to follow. The periostitic pains may be relieved for a time, but they soon return; again mercury is had recourse to, and again the pains return; in the meantime the constitution of the patient rapidly gives way under the combination of struma and the uncalled for administration of mercury. I have seen but too many instances of what I now state, and therefore I am particularly anxious to direct attention to those cases which, as far as I can discover, have not been spoken of by writers on syphilis, struma, or periostitis.

It may be asked, what are the distinguishing marks of these cases? I can only say that, in those which have come under my observation, the periostitis followed the appearance of the chancres at considerable distances of time—many months, or two, four, even six years intervening—it was unaccompanied by any form of eruption, and was not *immediately* attended with sweating, nocturnal exacerbation, or emaciation; there was no sore throat, or other unequivocal syphilitic symptom, circumstances which, when coupled with the fact that the sores on the penis were treated on the non-mercurial plan—a plan allowed on all sides *to interfere less with the order of succession, and the natural combinations or forms of grouping, of syphilitic symptoms*—these circumstances, I say, constitute the basis of a differential diagnosis, which, when followed by the line of treatment indicated, leads to the happiest results. In all such cases mercury is inadmissible, and our chief reliance must be placed on iodine in its different forms, sarsaparilla, nitric acid, tonics, iron, nourishing diet.

In fine, I have a few remarks to make with respect to hydriodate of potash, which I trust you will not consider superfluous. I have observed that this remedy will frequently cure periostitis and other affections when given in free doses, though the disease may have resisted its influence when given in small quantities. I am never dissuaded from trying it by the assurances of the patient or his medical attendant that the remedy has had a fair trial; in such instances I begin with the doses usually ordered, and increase the quantity daily, carrying it in some cases to *half a drachm* three times a day, a mode of administering this medicine I found extremely beneficial.

The following case is an excellent illustration of the efficacy of this method. Mr. M. had severe periostitis, after long-continued mercurial treatment of syphilis, and was much reduced by frequently repeated salivations. In August, 1839, Mr. Carroll, of Meath Street, advised him to place himself under my care. From August to December, 1839, he took *sixteen drachms* of hydriodate of potash, in five-grain doses, gradually increased to ten grains three times a day. His general health improved, he grew stout, and appeared quite cured, but towards the end of January, 1840, he relapsed, and again took the same medicine with temporary relief. This happened several times, so that before December, 1840, he had consumed *thirty-three drachms* more. In that month he again relapsed, when he consulted Surgeon O'Ferrall, who advised a recurrence to the same remedy in much larger doses, and to be persevered in *until all periostitic swelling and every vestige of pain were removed.* He now took *half a drachm* three times a day, until *twenty drachms* were consumed. He took on the whole, from beginning to end, *eight ounces five drachms* of this medicine, and has been perfectly well ever since!

Hydriodate of potash does not appear to exercise the same powerful control over syphilis characterized by the copper-coloured eruption as other forms; these cases are more advantageously treated with corrosive sublimate and sarsaparilla, and this opinion accords with the views of Mr. Carmichael, who limits the administration of mercury to this form of the secondary disease, and to the peculiar ulcer, which according to his doctrine precedes it, namely, the Hunterian chancre. There are two classes of cases in which hydriodate of potash is more particularly serviceable. The one includes those instances where the symptoms have not been set astray, so to speak, by the frequent and injudicious employment of mercury—the other embraces those cases in which the periosteum, the bones, and the mucous membranes are extensively engaged: in the latter instance presenting ulcers of the nose, tonsils, pharynx, tongue, inside of cheeks and lips, usually associated with large and painful condylomata at the verge of the anus, and the mucous tubercles of the French writers, on the scrotum, inside of thighs, &c. In such forms of the disease, hydriodate of potash, either singly or in combination with sarsaparilla, is by far the best remedy we sess. We as yet want facts to determine accurately the parative value of hydriodate of potash and corrosive sublimate those particular cases which indicate to every practitioner, ther he be a non-mercurialist or a mercurialist, the necessity iving sarsaparilla, tonics, good diet, &c.

LECTURE LXVII.

PERIOSTITIS.

I SHALL to-day, gentlemen, proceed to make some remarks on the general pathology and treatment of periostitis. I regret to state that the articles on this subject in Cooper's *Surgical Dictionary* and other works are deficient in a practical point of view. It is a disease which has been known as long as syphilis; but its true pathological nature was not pointed out until Sir Philip Crampton described it in the first volume of the Dublin Hospital Reports. We have frequently heard tenderness of the skin with increase of size termed swelling or diseased growth of the bone; but you will find that, in most of these cases, the swelling and other symptoms are owing to the peculiar state of the periosteum alone. Periostitis is a disease of considerable importance, because its symptoms are produced by scrofula and other cachectic states of the constitution, as well as by the abuse of mercury and other remedies. You will have occasion to observe instances of this disease superinduced by cold, or by giving mercury under unfavourable circumstances, and in the latter case frequently confounded with syphilis. This is an important fact, and you should hold it in memory. Another great mistake is, confounding it with neuralgia; or, where it attacks the head, with hemicrania, because one side of the head only may be affected, and the pain may be increased at a stated hour, generally towards night. I have seen the carbonate of iron given in large doses by a medical gentleman of considerable eminence to cure a pain in the side of the head which arose from inflammation of the periosteum. Another instance of a similar kind has lately come under my observation in private practice, and once I committed the same mistake myself.

Before I enter into the further consideration of this subject, I must state to you that an opinion was formerly entertained that membrane or periosteum was the repairer of bone, where its eneration was necessary. But in this process the vessels of bone itself are as much concerned, and membrane contributes hing to the formation of bone, *except so far as its vessels are aged*. The formation of callus in fractures, the development ealthy bone in necrosis, the organization of node and exostosis end not on any membrane, but on the vascular part of the iosteum, and on the vessels of the bone itself. It is true, vever, that where other vascular channels are cut off, the iosteum will, to a certain degree, supply their place, thus be- ning the sole means of establishing vascular communication. is to Scarpa we chiefly owe our information on the true nature the reparation of bone. You will find, on this subject, a great mber of experiments detailed in Cooper's *Surgical Dictionary*. With respect to the periosteum, it is, like other parts of the tem, liable to inflammation ; but you are not to suppose that liability is greater than that of other tissues. This would tradict the arrangements of nature; for it is with this mem- ne she has clothed many parts of the body which lie close to surface, as the shins, head, ribs, elbow and other joints, which, ide the periosteum, have, for the most part, only a thin cover- of integuments. You all know how frequently the periosteum exposed to injury in the football matches of schools, and at Irish fairs, and with how much impunity. I may observe e, that the term I shall employ in speaking of the affections this membrane—periostitis—is a name introduced by Sir ilip Crampton. Now, according to the view which I have en of the formation of bone, it will appear that the subjacent ne is often as much diseased as the periosteum, and, indeed, netimes the disease commences in the bone, and afterwards ends to the periosteum. With this exception, the definition en by Sir Philip Crampton is good. I beg leave to mention, *passant*, that Mr. Howship's papers on the Formation and seases of Bone are deserving of your perusal. He has mined and given delineations of the various structures of eased bone ; but I do not consider his account of the structure bone to be sufficiently established to enable us to decide portant pathological facts.

You will observe that, in inflammation of the periosteum, the uliar texture of this membrane modifies the symptoms of the ease. The periosteum is fibrous, and, though not thick, is remarkably strong and unyielding, lacerated with difficulty, and does not accommodate itself except to that which it was intended by nature to cover; hence, if a part increases in size, the periosteum over it is stretched and tightened, and this is one of the principal causes of the severe pain usually felt. You are aware that the swelling which attends the common forms of inflammation of areolar substance, where the parts can extend themselves on every side, must be differently circumstanced from that which arises from abscess under fascia, or lying close to a bone, and that there must be a corresponding difference in the pain. You will find, in various surgical works, that, in periostitis, the pain is sometimes very great where very slight changes have taken place, and that little pain is felt in some cases where there is considerable alteration of structure.

It is a remarkable fact that, in many instances of periostitis, exactly corresponding parts of the bones of different extremities, on different sides of the mesial line, will be found simultaneously or successively attacked. Thus, if a certain spot on the bones of one fore-arm, or one acromion, or any other part of the scapula, be attacked by inflammation, similar appearances will manifest themselves in the other, either at the same time, or in a few days after. If it seizes on one clavicle, you soon observe it in the other. You will have occasion to treat this disease in perhaps most of the human bones, but particularly in the head, tibia, femur, sternum, and scapula. In the sternum it sometimes leads to carious destruction, forming a large hole in the bone, as happened in a young man formerly in this hospital; in his case, each stroke of the heart caused matter, mixed with air, to bubble out, presenting a very curious and frightful appearance.

Periostitis, occurring in the neighbourhood of joints, often spreads to the joint itself, giving rise to periostitic arthritis. Thus, from the tibia, it frequently spreads to the knee or ankle, and from the humerus or scapula to the shoulder joint. The sternal articulation of the clavicle is a favourite seat of periostitis. In the ribs it much more frequently attacks them in their anterior portion, not far from the sternum, or from their cartilages, and occasionally gives rise to costal caries, for which Cittadini has recommended a particular operation. I would recommend you to hold in memory that, when the disease affects the thigh-bone, it is almost invariably about the *junction of the middle and lower* *thirds*, and generally on its anterior or inner surface; this is a practical observation which I have not seen noticed in any books. In the work of the late Mr. Colles on the Venereal Disease, he points out the many symptoms, generally supposed to characterize morbus coxæ, which attend this affection, and particularizes the diagnostic features of the two diseases. There is also, in this form of periostitis, one peculiarity that, besides the very great severity of the pain which attends it, we find that it yields with the greatest possible difficulty to medicine, and that the means of curing it are a desideratum we have still to discover.

The next species, most remarkable for its painful symptoms, and one which deserves to be explained more fully, is periostitis of the head. There are three subdivisions of this species. The first kind is very easily recognized, for you will find the affected spots sore, slightly swelled, and hardened, with marked tenderness on pressure, and the headache which accompanies them radiating from these spots as from so many centres. In the second form you will find the pain obscure and not confined to a certain spot, but the swelling and thickening of the scalp are evident, and give certain indications of the nature of the disease. You may also observe cases where the inflammation is diffused over one side of the cranium, and not fixed to a small distinct spot, and these are attended with severe pain. With respect to these varieties, you will not find much difficuly in ascertaining their nature; but there is another kind in which the diagnosis is much more obscure.

A patient, for instance, complains of severe headache, at first attended with intermissions, generally increased towards night, and accompanied by a sense of weight in the head; his eyes look watery and heavy, and lose their usual animation, and his spirits are depressed. Ask him in what part of his head he feels the pain, and he cannot tell you exactly. Sometimes he refers it to the forehead, sometimes to the side of his head. There is no point of the scalp in which you can detect any soreness or swelling. Matters go on in this way for some time, he begins to lose his rest, the intermissions become shorter and not so perfect, and the pain increases. During the day it is tolerable, but towards evening it is excruciating, and does not allow him to enjoy one hour's rest in the twenty-four. The largest doses of opium and other strong narcotics are useless. Rest in bed, stupes, cold lotions, narcotic liniments, even bleeding and leeches give but very small relief. After exerting all your ingenuity, you still have the mortification of finding that there is something wrong going on which eludes your skill.

On your first visit, from the appearance of the patient and the detail of his symptoms, you are led to suspect that the brain is the part diseased. You employ your antiphlogistic remedies, but find no improvement, and begin to doubt the correctness of the diagnosis. Moreover, in cases of this kind, where you find a tenderness in the integuments on close examination, and pain limited to one side of the head, there is occasionally a partial ptosis of one eyelid which creates alarm, and leads you to imagine that it is the brain itself which is affected. Ptosis, or falling down of the upper eyelid, is a very frequent symptom of cerebral disease; and, consequently, in determinations to the head in fever and other complaints, it is a bad sign when one eye, in consequence of some degree of ptosis, appears smaller than the other. There is certainly some degree of paralysis in this case, but it is only secondary, and not depending on the brain, but on the inflammation affecting the nerves themselves. I mention this, because it is not generally known or described, and because it is liable to excite alarm.

Now, why is this disease not easily recognized, or why is the bone so often devoid of tenderness to the touch? It is because the internal surface of the bone is the part first engaged, and the disease cannot become evident until after some time. After your usual treatment has been continued for a week or ten days with little improvement, a certain spot on the head will be found tender on pressure, and it is only then that the true nature of the case will appear. For this disease there is no cure but mercury and iodine. However useful depletion may be to prepare the system, nothing but these remedies in large doses will relieve the disease.

Give a scruple or half a drachm of calomel in the course of the day, and bring the system thoroughly under its influence. You will do well to combine different preparations of this remedy, as there are some constitutions which are more quickly affected by one preparation than by another, and then combination is always valuable. It is very remarkable that, though you have made the mouth sore, relief is not immediately obtained; you must go on and affect the system very decidedly, and when you have accomplished this, the pain and other symptoms will disappear. Of this we have an instance in the chronic ward. A periostitic patient had his mouth sensibly affected for several days, but with very little relief of pain. What did we do? We doubled the dose of calomel, and in a few days the pains had altogether disappeared.

You may have perceived analogous instances in cases of iritis, where the disease begins to diminish on the mouth being made sore, and even may appear to have entirely subsided. Encouraged by this, the practitioner decreases the dose of mercury; the mouth continues sore, but in a few days, although the small doses of calomel are continued, and although the mouth is still affected, the characteristic symptoms of iritis again recur, and go on increasing, if you continue to trust to the diminished doses of calomel. Under such circumstances a beginner might be discouraged and lose confidence in mercury, because the iritis had returned while the mouth was still sore, and before the remedy was discontinued. What is to be done? Instantly resume the large doses of calomel with a more decided mercurial action, and the iritis disappears. In the mercurial treatment of periostitis, arthritis, peritonitis, and pleurisy, a similar method of managing this remedy is occasionally required, and it is of vital importance that you should know this.

With respect to that species of periostitis which affects the femur, you must recollect that this bone lies so deep that it is sometimes not very easy to detect the periostitic swelling. Generally it is the part of the bone before mentioned that is attacked, and in the cases I have seen, the inflammation was on the inner side of the bone. From its situation, this species is very apt to be mistaken for various diseases, particularly neuralgia, sciatica, abscess in the shaft of the bone, morbus coxæ, &c. After some time a certain degree of tumefaction may be distinctly felt, but not until the patient has suffered excruciating agony and distressing want of sleep; indeed, in one case, the poor sufferer scarcely slept at all for twenty nights in succession. One of these cases was relieved by corrosive sublimate, but two others were not in the least improved by mercury pushed to the utmost. Narcotics totally failed, but a seton over the affected part seemed to do some good. But to return to periostitis affecting the cranium; it occasionally assumes the chronic form, attacking both surfaces of the bone in a slow, insidious manner. The following instructive example of this affection fell lately under my observation.

A young man of good constitution, previously healthy, became subject to epilepsy very frequent and violent. Some time previously he had complained of headache, chiefly referred to the left side of his forehead. The convulsions on the right side were stronger than on the left. He continued in this state for many months, and became incapable of pursuing his usual occupation. The convulsions became more frequent, recurring at different times of the day; and some of his medical friends thought they observed a prominence in the frontal part of the skull, and were anxious to have him trephined in that spot. On looking at him in front, you could not at once perceive any unnatural elevation in the forehead; but, by examining it from above downwards, according to the norma verticalis of Blumenbach, there was a perceptible swelling, as if the whole bone had been pushed forward in that situation.

After seven months' illness, he was seen by Dr. Colles, Sir Philip Crampton, and myself. We objected to his friends' proposal to trephine, because we could not be certain that there was any projecting growth of bone pressing on the brain in this place, and because it had a certain degree of tenderness on pressure. We were afraid also that there was an intimate union between the internal periosteum and the dura mater, as well as between the latter and the surface of the brain; consequently there was danger that the operation might induce inflammation in all these parts. Considering it to be a case of internal periostitis, in which the inner table of the bone and corresponding part of the dura mater were affected, we agreed to try the effect of mercury. We employed frictions for this purpose, as the internal exhibition of mercury produced sickness and vomiting; and at the end of eight or ten days, when the mouth became affected, we had another consultation. We were told there was no improvement; the fits still continued; his friends exclaimed that mercury was useless, and called for the application of the trephine: we were almost in despair. On closer inquiry, however, we found that though the fits had displayed the same violence, there was some slight diminution in their frequency, and on this slender hope we urged the continuance of the same remedy. As soon as his system was completely affected, the disease began to decline perceptibly, and he became free from pain, and the convulsions ceased.

When the vertebræ become the seat of periostitis from syphilis, scrofula, or abuse of mercury, it will be generally found in the bodies of the vertebræ. When brought on by syphilis alone, I believe it seldom attacks the bodies, such cases chiefly arising from the abuse of mercury or scrofula. In persons of broken constitution, from combined venereal and improper mercurialization, it is not an uncommon occurrence to find the neck presenting the symptoms of subacute crick, or collum obstipatum, which, if treated in the common mode, the disease becomes confirmed; and of this I have seen an instance in a gentleman whose neck became permanently stiff for want of skill in his medical attendants. It will be obvious that inflammation of this kind affecting the vertebræ, may be readily communicated to their ligaments and the adjoining tendons, and in this way produce the deformity. I have treated some such cases, and would turn your attention to it, because you will not find it mentioned in books. You will be able to know it by careful examination by pressure, and find that its cause was disease of the periosteum of one, two, or three of the vertebræ; and you will employ, in treating it, leeches, repeated blistering, and compound decoction of sarsaparilla, with hydriodate of potash. If this does not do, give mercury, and except the disease has continued too long, you will cure it.

Other vertebræ, as those of the back and loins, may become the seat of periostitis, and it may be mistaken in these cases for Pott's disease, or for Teale's spinal neuralgia, from which it is sometimes difficult to distinguish it. Periostitis sometimes attacks the sacrum and os coccygis, and is then peculiarly painful, as is now exemplified in the male ward. In females, I have been twice consulted within the last year for a pain in these same parts, which was at times excruciating, and always considerable; it was increased to an intolerable degree by sitting down, and hence they were obliged to avoid society. It appeared to be a variety of hysterical neuralgia, and yielded to nervous medicines combined with tonics, together with the local application of stupes, narcotic liniments, &c., &c. I know not whether authors have mentioned this peculiar neuralgia.

When periostitis attacks the sternum, it is very liable to be mistaken for disease of the chest. I remember a young gentleman, some time ago, who had a severe pain in his chest, which gave his father such alarm lest it might be consumption, that he brought him with him to London for the benefit of change of air and to have medical advice. On his way thither he caught a cold, and in this condition waited on a medical gentleman, who prescribed medicines for him adapted for the cure of pulmonary disease. On his return to Dublin (his pain still continuing) I was called in to treat him for a complaint in the chest. On placing the stethoscope over the spot where he complained of pain, he winced, and, after a minute examination, I discovered that the disease was entirely confined to the periosteum. It is possible, however, that in such cases the disease may ultimately reach the chest, for the sternum is a very porous and spongy bone, and a complete perforation of its substance may be the result of periostitis long continued. Another way in which it may be confounded with rheumatism of the intercostal muscles, or pleurisy, is where periostitis attacks the ribs. This is a very common source of pain, tenderness, and stitch of the side.

There is a form of periostitis which extends from the bones of the foot to the plantar aponeurosis; it is found chiefly in labouring men; and the predisposition to it seems to arise from the use of the spade in digging. I do not know that this form has been mentioned by any author I am acquainted with. The following symptoms are generally present. The patient complains of excessive pain in the sole of the foot, extending into one or both malleoli whenever he attempts to lay the plantar surface flat on the ground, and in order to save himself, he walks either on the heel or outer edge of the affected foot, the toes of which are strongly contracted, so as to relieve the tense condition of the plantar fascia. The pain is much increased when pressure is made in the centre of the sole or on one of the malleoli, these latter processes being generally enlarged, and accompanied by swelling of the adjacent parts. Besides the pain produced by pressure on the plantar surface, the patient generally suffers from lancinating pain through the ankle-joint. This disease is one of frequent occurrence, and many cases of it are admitted every winter into the Meath Hospital, where it is familiarly known by the name I have given to it, viz., "Plantar Rheuiatism." The most severely painful instance of all the varieties f periostitis is, perhaps, the paronychia periostei, or bonehitlow, to which, as it belongs to surgery, and its treatment is ell known, I shall merely allude.

I shall now enter into the consideration of the special pathology f periostitis. This disease may be divided into two kinds, the iffused and the circumscribed. With the former we have othing to do, it is never found in the medical wards, and comes roperly under the care of the surgeon. It may, however, be ell to mention its chief characteristics. By diffused periostitis mean that form which occupies a large portion of the perioseum, which arises from cold, accident, and other similar causes, hich has no connexion with, or dependence on particular states f constitution, or specific diseases, and which frequently erminates in necrosis. The other species, which comes more mmediately under the care of the physician, I have termed ircumscribed, from its comparatively small extent.

Circumscribed periostitis may arise from cold, but, in the ajority of instances, its origin may be traced to some specific ause, as mercury, syphilis, or scrofula. It is a much more equent disease than the former, and presents several varieties. n the first place, it may exist without detachment of the eriosteum from the subjacent bone. Here the periosteum ecomes inflamed and thickened, while the bone beneath ssumes a greater degree of vascularity and consequent increase f size. By this process, which is always comparatively slow, he connexion between these parts is increased, and the tendency f the augmented vascular action is to form depositions. Hence, he thickening of the periosteum is sometimes very great, and in rocess of time forms a very considerable circumscribed tumor, hich to the touch feels so solid that it is often taken for bone. n this stage of the inflammation pain and tenderness are omplained of in the affected part, and we sometimes find the ntegum ents swollen and discoloured. Matters, however, after ome time, assume a more chronic form, and the intensity of the ymptoms diminishes, there is little or no tendency to grow arger, and the pain and tenderness undergo a change for the etter, though they do not cease altogether.

It is at this period that the periosteum, previously thickened, ecomes more dense in its structure, and in some cases seems to be almost converted into a fibro-cartilaginous tissue. When this change has been effected, it is doubtful whether the diseased mass is ever again absorbed, though it must be confessed that swellings, whose history and physical characters strongly indicate their having undergone this change, occasionally disappear altogether in the course of a few months. Many instances will occur in the practice of medicine, where cartilage, or even bone, is absorbed under other circumstances, evincing the value of proper treatment, or the efficacy of unaided nature.

To recapitulate: inflammation of the periosteum, attended with deposition and thickening, without effusion of fluid, with increased vascularity of the subjacent bone, and adhesion between it and the periosteum, after remaining for some time, will be found to decrease in the violence of its symptoms, and to assume a fibro-cartilaginous hardness, and in this state it may be absorbed or not. That it may be absorbed, we are led to expect from analogy; for we see frequent instances of the absorption of cartilage and bone; but it will be often found to continue for life, and, in some instances, to be converted into a true bony node. It is worth your while to consider how the latter process takes place. Ossification commences in the thickened periosteum, and bone is formed, constituting in general a circumscribed bony node which rises from the external surface of the subjacent bone. In process of time the external lamina of the true bone becomes absorbed, and at the same time a cancellated structure is developed in the node, which becomes continuous with the cancelli of the bone beneath, and thus there is formed on it a kind of bony arch. We are not able to ascertain at what period this takes place; but you will find instances of this formation in a state of progress in Mr. Howship's account of some specimens in Mr. Heaviside's museum, in which he discovered that the external surface of the old bone was not quite absorbed, and that no cancelli were as yet formed. A considerable disfigurement is frequently the consequence, where this affection attacks various parts of the same limb; and you may have observed a man in the chronic wards in whom the shape of the tibia is lost from this cause.

A recurrence of these attacks gives rise to several irregular and partial elevations on the bone, which blunt its edges and fill up its natural concavities, so as to leave scarcely a vestige of its riginal symmetry, a circumstance which may be frequently bserved in the deformed tibiæ of prostitutes. You observe, entlemen, in the first stage of this disease, the thickened eriosteum presents uniform density, but in process of time a ancellated structure makes its appearance in their deep-seated ortion, while, as in the natural shafts of long bones, a layer of rm osseous structure constitutes their surface. It is obvious, herefore, that in the first stage there is a distinct line of demaration between the new and original structure; while, in the econd stage, no such distinct boundary exists, the cancellated ortion of both being perfectly identified.

The next form of periostitis is that which is attended with letachment from the subjacent bone, of which there are several varieties. In the first kind you find that, in a space varying from wenty-four hours to eight or ten days, an elevation appears on ome part of a bone, with pain and tenderness on pressure, and orming a hard tumor, giving to the touch the feeling of a solid ubstance. This error may be detected by a more accurate xamination, and there will be some elasticity discovered in the welling. The cause of its seeming to be a solid tumor arises rom the manner in which the periosteum is tensely stretched ver the effused fluid. In the second stage of this variety there s a gradual diminution of the pain and swelling; the fluid, which was effused under the periosteum, is absorbed, and the ubjacent bone and periosteum become again united. This rocess generally occupies some time; but there are instances where its accomplishment is more speedy. Of this nature are he tumors which arise and disappear with such rapidity on the scalp and elsewhere, which yield quickly to leeches and blistering, and, after existing for some weeks, or perhaps even days, vanish, and leave no sensible trace behind. The pathological distinction of these tumors consists in this: that the surface of the subjacent bone does not die, and, consequently, the process of reparation is short; for when the effused matter is absorbed, there is nothing to prevent the adhesion of the bone and periosteum.

The variety just described is not attended necessarily with ulceration of the skin; but there is another kind, in which effusion as just described takes place, accompanied by increased vascularity on the surface of the bone beneath. The matter effused at length escapes through an opening made by ulceration in the integuments, and nature effects a cure by means of granulations arising from the vascular surface of the bone, which, uniting with granulations from the periosteum and integuments, repair the breach of substance, and produce consolidation of the separated parts.

In the next variety, matter is effused beneath the periosteum, and the bone of the affected portion becomes vascular at a little depth, while the surface is white and dead, consisting of a thin, worm-eaten cribriform lamina, which, after some time, separates and opens for itself a passage through the integuments. This exfoliation is followed by a growth of granulations from the vascular bone beneath, and the process of healing is perfected in the manner before described. In some instances the dead limina is not thrown off at once, but undergoes a very curious process, being perforated, and as if worm-eaten, thus allowing the granulations thrown out by the healthy bone to pass through its structure until the whole of the disorganized plate is removed.

Such are the chief varieties of periostitis, exclusive of that species which is observed in scrofula, and which, from the disease simultaneously affecting the bones and periosteum, can scarcely be called periostitis. In some vitiated and cachectic constitutions the periosteum becomes affected, in consequence of ulceration commencing in the skin from rupia, boils, or ecthyma; this, however, I shall not enter into at present. With respect to the derangement which takes place in the skin, it always bears proportion to the internal ulceration, and in the first species mentioned there is scarcely any. In the other kinds, it is of great use at the commencement to cut down to the bone through the integuments and periosteum, as recommended by Sir Philip Crampton; for this practice, by lessening the inflammation, limits the quantity of bone which is about to die, and consequently the extent of integument likely to be removed by ulceration.

When we come to consider periostitis, and investigate its causes, we find that it frequently arises from specific poisons, as scrofula, mercury, or syphilis. You have many opportunities in the surgical wards of becoming acquainted with the characteristic marks of that form which owes its existence to scrofula; it is generally milder in its symptoms; there is less pain and tenderness; the swelling is less; and it is most commonly observed in young persons in whom we cannot suspect the operation of syphilitic or mercurial causes. I do not, however, mean to say that you will not find the latter causes combined with scrofula even in very young persons; but such an occurrence is rare. But where this disease occurs at later periods of life, you are sometimes puzzled to decide whether it is a consequence of syphilis, or whether it is superinduced by mercury. When called to a case of this kind, inquire accurately into its history, and if you find the person has taken mercury for the cure of primary or secondary symptoms, that it cured the disease, and the cure was decided; that in a week, a fortnight, or a month after this the patient was exposed to cold; that a great number of spots are simultaneously affected, and in corresponding parts of the limb,—you will be led to conclude that the disease is mercurial periostitis. About a week ago, a young gentleman called on me with several periostitic swellings on his bones. I said to him, "You were taking mercury within the last six weeks." He said he was. "You then went out, and got cold." He said he had; and in this way I extracted from him the history of his complaint, and guessed it with such accuracy that he stared at me as if I had a hundred heads. Such a case as this, gentlemen, arises from cold affecting the constitution while under the influence of mercury.

But there is still a more perplexing one; you may have mercurial periostitis mixed up with venereal symptoms. This is no uncommon thing among persons advanced in life, who have had frequent attacks of venereal, and undergone repeated courses of mercury. You have the two diseases blended in a very complicated form, and then indeed are we placed between Scylla and Charybdis, mercurial action producing a cachectic state of constitution, and venereal a diseased state of certain parts. Moreover, you are all aware everything that impairs the constitution has a tendency to bring on scrofula.

Now, take a person who is suffering from syphilis; deprive him, as you often must (from the confinement a mercurial course requires), of pure open air, keep him on low diet, and what is the consequence? To the syphilis and mercurial cachexy you have scrofula frequently superadded, and that hideous combination of disease which we sometimes meet with at the present day, but fortunately not so often as formerly. Some years ago, all such cases were mercurialized—often to death. In the wards of the Lock Hospital in this city, the progress of the patient towards cure was calculated in proportion to the number of pints he spat during the day. In the skulls of persons who lived during the last century, preserved at Leyden, the destruction of the bony tissue is extraordinary; indeed, a phrenologist would be often puzzled by the havoc made by disease among the organs of our forefathers. An old writer, I think it was Herodotus or Xenophon, says that the skulls of the Egyptians lying on a field of battle could be recognized by their hardness. Those of the last century, it seems, we can distinguish by their softness. This is no longer the case; longevity, in the present century, is remarkably increased; and I think there are some countries which will be considerably raised in the scale of population, from the improvements introduced in the treatment of venereal; for this we are chiefly indebted to English surgeons and physicians.

To this subject I have, in the lectures lately delivered on syphilis, especially called your attention; but I cannot avoid saying here, how much credit is due to Sir Thomas Moriarty, Mr. Mathias, Mr. Carmichael, and other surgeons, who were the first in pointing out the baneful effects of excessive courses of mercury. Dr. Thompson, of Edinburgh, has also done a great deal in promoting our knowledge on this point. It is but just to mention, while speaking on this subject, the valuable and important services of our fellow-townsman, Mr. Carmichael. When he first published his observations on the treatment of venereal disease, his opinions were looked upon as merely theoretical by most of the surgical profession here, and his practice industriously decried. I do not go so far as to admit all that Mr. Carmichael has advanced; but it is from him we first received abundant proofs that the majority of cases of syphilis can be cured without mercury, and this is highly important.

To the knowledge of this fact, to the more judicious employment of mercury, to the introduction of vaccination by Jenner at the beginning of the last century, and the general improvement not only in diet, but also in medical and surgical treatment, we are to attribute the increased longevity of the present period. Human life had almost doubled, and we began to hope that in 1900 it might be quadrupled. The mortality in London decreased in the proportion of 15 per cent., and the profits of insurance companies increased. In Dr. Hawkins' book, which was published in 1829, you will find that he strongly expressed his gratification and delight at the cheering prospect which lay before us; and we were all ready to sympathize in his anticipations when, unfortunately, the cholera came, and brought us back to our original position.

But to return to our subject. It is unnecessary for me to bring proofs in support of the opinion that mercury alone brings on disease of the bones. You are aware of the case of a man named William Byrne in this hospital, who got mercury for disease of the liver, and returned in a fortnight after he was discharged, with periostitis. Dr. Lendrick had a case of poisoning by corrosive sublimate some time ago. The stomach pump, and white of egg, succeeded in saving the man's life, but he got a severe attack of periostitis.

I shall now detain you for a short time in speaking of the treatment of periostitis. As to the local means, you will find much good from leeching, and blisters dressed with mercurial ointment, particularly when the disease is recent, and the inflammation circumscribed. I have also found the greatest benefit from mercurial inunction over the affected part. If the blisters produce but little effect, try the tartar emetic ointment; I have found it useful where blistering failed. In obstinate cases Sir Philip Crampton's plan of cutting down to the bone may be had recourse to. When a periosteal node breaks, and matter is discharged, and you observe the bottom of the sore covered with pale, unhealthy granulations, or a piece of diseased bone lying in it which ought to be detached, introduce a stick of nitrate of silver, and touch not the whole, but some given part of the surface every day, and you will produce a rapid improvement in its appearance. This treatment was introduced by Mr. Nichol, and you will find a detail of it in the *Edinburgh Medical and Surgical Journal* deserving your attentive perusal.

As to the general treatment of periostitis, where the constitution is strong, and there is no objection to the use of mercury, this remedy, in the form of corrosive sublimate, affords a very certain and speedy relief, having premised venesection and leeching. Even when the disease arises after a course of mercury or in consequence of syphilis, where its symptoms are violent and the constitution is strong, the rapid introduction of mercury is the best treatment you can adopt. This is particularly suited to that painful species of cranial periostitis which I have described, and which scarcely yields to any other remedy, and also to those cases where the disease attacks the shaft of the femur. In both of these affections the mercurialization, to be effectual, must be carried to decided salivation, and must be continued for three or four days after the mouth becomes sore, though you will meet some cases which yield before salivation. This, however, is an uncommon occurrence. Where the symptoms are less violent, we may content ourselves with Plummer's pill, or blue pill, in alterative doses.

In persons of delicate habit, who are much worn out by disease, and where all other means fail, corrosive sublimate sometimes succeeds, or Velno's vegetable syrup. The latter acts on the constitution in a mild and beneficial manner, and I have seen many persons restored to health by its agency. We must never forget, however, that there is a material objection to the use of mercury among the poor in hospitals; for, on returning home, they are almost invariably exposed to fatigue and cold, have consequently a strong liability to relapses, and are then of course worse than before. This unfortunate occurrence may be generally avoided among the wealthy, and to them the mercurial cure is therefore more applicable. Besides mercury, the most effectual remedies are colchicum and tartar emetic, but particularly hydriodate of potash. You will find that, after bleeding or leeching, by employing colchicum with narcotics, as, for instance, the wine or tincture of the seeds of colchicum, with Battley's sedative liquor or black drop combined with magnesia, you will produce a very powerful effect. You are aware of the power which colchicum possesses in subduing inflammatory affections of the heart, and also of the joints, and it must be looked on as a very valuable remedy. With reference to hydriodate of potash, I am convinced that it possesses greater power over this than almost any other disease. It is of extreme service in all forms of periostitis, whether arising spontaneously, or as a symptom of syphilis, rheumatism, or abuse of mercury. The same rule should be observed which was before laid down, namely, to increase the dose gradually, until a decided impression is made on the disease.

You have, in addition to this, the different antimonial preparations. The antimonial wine and James' powder will be particularly serviceable. You cannot combine colchicum with antimonials, in consequence of their effect on the stomach, but you can combine either with narcotics. During the whole course of the disease you must employ narcotics; they relieve pain, and are to be used plentifully, but with discrimination. When the disease becomes chronic, give sarsaparilla with nitric acid. The latter enhances the value of the sarsaparilla, though we are unacquainted with its *modus operandi*. You have, therefore, gentlemen, four modes of treatment: first, the mercurial, which, where it is admissible, is the most speedy and effectual; next, the antiphlogistic, consisting of bleeding, leeches, colchicum, antimonials, and narcotics; thirdly, the chronic treatment, which comprises sarsaparilla and nitric acid, with narcotics, change of air, and time; and fourthly, that by hydriodate of potash, either by itself, or, what is better, in combination with sarsaparilla.

Before concluding, let me call your attention to an affection nearly allied to periostitis, by which looseness of the teeth is caused, namely, inflammation of the alveolar processes and sockets. Sometimes this originates in disease of the tooth itself, or of the gums; but in other instances the diseased process commences in the alveolar periosteum, and by spreading to the socket and gums, it gives rise to great pain, swelling, and sponginess of the latter, while it eventually detaches the fangs of the teeth implicated in the attack from the grasp of the sockets, and thus at last the teeth fall out, though in themselves they exhibit no appearance of decay.

The progress of the disease is accompanied by extreme pain, and as a puriform discharge oozes out between the gums and the inflamed periosteum, many limit their attempts to local means, and often succeed in effecting a cure by frequent applications of leeches to the inflamed gum, and in very obstinate cases by incisions freely made through the gums and periosteum. Last year a patient of mine was thus affected, and thus treated, and although, under the care of a most skilful surgeon, and of an eminent dentist, he lost successively a left bicuspis and molar of the upper jaw. His sufferings were for a short time relieved by the extraction of each tooth, but in a few days became as agonizing as ever, when, finding all the neighbouring teeth loose, and being told that they also must soon be drawn, he had recourse, in despair, to a celebrated homëopathic doctor, whose infinitesimal doses completely failed, for the patient's sufferings were produced by a direct physical cause, which lay far beyond the limits to which the influence of even the most powerful imagination can possibly extend. Happening to mention his wretched state to me, I immediately recollected that, a year before, I had successfully treated him for a periostitic affection of the sternum and ribs, and that hydriodate of potash was the medicine which served him most. I recommended him to use ten grains of it three times a day, and had the satisfaction of perceiving a daily improvement, so that pain and inflammation soon ceased, and in about ten days the teeth were all fastened.

The periostitis to which this gentleman was liable was of a rheumatic nature, otherwise his constitution was sound, and he was only thirty-four years old.

LECTURE LXVIII.

AUROSIS.—PAINFUL AFFECTIONS OF THE FEET.—CANCRUM ORIS.—
BSCESSES IN THE NECK.—SINGULAR MOBILITY OF THE STERNUM.

the present lecture I purpose calling your attention to certain ffections which the systematic arrangement hitherto followed id not permit me to notice previously. I shall first speak of maurosis.

There was in the hospital a man whose case had been marked nperfect, or, to use a better phrase, incomplete amaurosis. He ad been complaining at different times during the previous year, nd for six months before his admission his vision had been very eak, with the exception of occasional intermissions. He could erceive objects tolerably well with the right eye, but scarcely at l with the left, and, in both, vision was more or less dim and nperfect.

On examining this man's eyes, you cannot discover in either of hem the slightest perceptible defect as an optical instrument. he deficiency of vision, therefore, does not depend on opacity f the cornea, on disease of the lens or its capsule, or on any ffection of the aqueous or vitreous humours; it is simply an npairment of the vitality of the organ, connected with functional isease of the retina. Having thus satisfied ourselves as to the eat and nature of the disease, we come next to inquire into its use and origin. From a careful examination of the man's state health, we can have no doubt on our minds as to whether the maurosis in this case has been produced by derangement of the omach or not. You are all aware that the celebrated Richter as long since shown that functional disease of the retina is often nnected with a deranged state of the alimentary canal, and that may be treated successfully with emetics and purgatives. ere, however, we have no evidence of the existence of congestion derangement of the stomach and bowels. The man's appetite good, his bowels regular, and his health robust.

But when we come to examine the head, we find evidence of cerebral congestion sufficient to account for the functional lesion of the optic nerve. Our patient has been a long time complaining, at different periods, of a sense of fulness in the head, and is subject to attacks of vertigo while walking, causing him to stumble occasionally, and labour under frequent apprehensions of falling down in the street. He prefers walking along the middle of the street to either side, and says that he is always worse when he attempts to walk along the flagway. This is an ordinary smyptom observed among persons who have a tendency to vertigo; they are frequently made worse by the operation of causes in themselves apparently inconsequential, and the nature of which we cannot well understand. You are aware that, in many persons, the act of looking for any length of time at objects moving rapidly in a straight line, and still more in a circle, has a tendency to produce giddiness. Thus, looking out of the window of a steam-carriage on the objects apparently moving backwards with great velocity, or looking over a bridge at the current of a rapid river, or gazing at a person whirled round in a gyrating swing, is very apt to give rise to vertigo.

Again, persons labouring under a morbid sensibility of the brain very often become giddy from looking at a succession of objects moving with much less rapidity. Hence you will find such persons made giddy by walking through a crowded city, and having a number of persons pass by them on the flagway, and they seek for an opportunity of getting into the middle of the street to avoid meeting so many objects. I knew a person who could never pass by a line of railing with any degree of comfort; if he happened to look at them as he moved by, he became almost immediately vertiginous. Giddiness is also generally produced by looking down from a great height in a vertical direction, or by looking upwards, provided the object be immediately overhead, and at a great distance. Under these circumstances most persons experience a feeling of vertigo, no matter what their position may be at the time. There seems to be little doubt that the sensation of giddiness does not depend merely on the distance or position of the object looked at. It would appear that, in general, some continuous communication must exist between the object and the spectator. Thus we feel giddy when we look down from a precipice at something below, r, when standing beneath the dome of St. Peter's or St. Paul's, ve regard with attention the vaulted structure above ; but we do ot feel giddy when we look down from a balloon, or look pwards at the moon or stars near the zenith.

It has not been sufficiently remarked by writers, that persons ubject to vertigo are often almost as much affected by looking pwards as by looking downwards. Persons who are inclined to ertigo will also become giddy by directing the eye with a fixed ttention for any length of time to the one object, such as con-inuing to look in a straight line, or endeavouring to direct the ourse of their movements along a plank or narrow pathway. These circumstances are all very difficult to explain, and I ring them forward merely as illustrating the fact of this man's reference for walking in the middle of the street.

In this man, as you may have perceived, we have several ircumstances calculated to direct our attention to the state of he brain as connected with the impairment of vision. Besides ertigo, and a tendency to stumble in walking, he had flashes of ight before his eyes, other and luminous hallucinations, with innitus aurium on one side. With respect to the flashes of ght before the eyes, I may observe that they may be produced y the operation of various causes ; a blow or pressure on the ye will cause them ; they may arise also from a particular state f the arteries which supply the optic nerve, and thus, at each ulsation of the heart, a flash of light is seen. This morbid ensibility of the retina, which, under such circumstances, ppears to be itself the source of light, is very often a symptom hich ushers in the extinction of the visual power.

It is a very general remark, that hyper-sensibility of an organ s but too often the prelude to total loss of its functions. Thus e frequently have a morbidly sensitive state of the eye before becomes incurably amaurotic, a morbid sensibility of the ear shering in loss of hearing, and unnatural excitement of the ense of touch preceding paralysis. But in this case we have ot only an irritable condition of the retina, but also an affection f the pupil; the iris is sluggish in its motions, and this ymptom occurring at this particular period, combined with the ertigo, luminous hallucinations, and gradual but steady progress f the disease, gives us some reasons to apprehend that it will nd in complete amaurosis. Seeing, however, that the symptoms have originated in a congested state of the brain, it is our duty, as far as possible, to check its progress. This is to be done by cupping over the nape of the neck, leeching the temples and behind the ears, and acting on the bowels by brisk purgatives. With the same view I intend to insert a seton in the nape of his neck, and to administer the nitrate of silver internally, combined with a small quantity of aloes, a remedy which is possessed of some valuable properties in the treatment of chronic congestion of the brain, whether tending to produce amaurosis or headache.

With respect to the causes of amaurosis, I may observe that they depend either on disease of the brain, as congestion, inflammation, the presence of tumors of various kinds, or on injuries of the retina itself, or of the supra and infra-orbital branches of the fifth nerve, or on affections of the alimentary canal. All these matters, however, have been so well detailed in different articles on amaurosis to which I refer you, that I shall pass over them at present, and close my notice of this case with a few desultory remarks. I mentioned in a former lecture that I had seen a very curious case of amaurosis, in which the cause of the disease seemed to be connected with an impression made by cold on the facial branches of the fifth nerve.

I have already taught the class that paralysis of any part of the body may arise from an impression made not only on its own nerves, but also on the peripheral extremities of the nerves of another and even a distant part. I have also remarked, that the fifth nerve is connected with the nerves of all the senses, but in particular with the optic; and hence we can explain why injuries of its supra and infra-orbital branches may bring on amaurosis. In the case to which I refer, the patient was exposed, while travelling outside on a stage-coach, to a keen north-easterly wind, and when he arrived in Dublin his lips were very much chapped, and the skin of his face bore evident marks of the cold and drying powers of the wind. Soon afterwards he began to complain of dimness of vision, and a thin gauze veil seemed to be extended between him and every object he looked at. After five or six days, when he applied to me, I found a considerable degree of amaurosis present, and at the distance of a few feet he was unable to recognize the countenance of a friend. He had no headache, vertigo, or tinnitus aurium—in fact, nothing to indicate cerebral congestion—and his appetite was good, sleep undisturbed, bowels regular. He had never thought himself, nor did a medical gentleman to whom he had applied ever suspect, that the impression of cold on the face had produced the amaurosis, and he said that he had been advised to get himself leeched and cupped over the back of the neck.

On examining into the cause of his disease, and having found that he had been exposed to severe cold, it occurred to me that the amaurosis might be connected with the impression made by cold on the superficial branches of the fifth nerve, and, on more accurate investigation, I found that there were some grounds for this opinion. I was further confirmed in this view of the subject by the details of a case communicated to me by Dr. Montgomery, in which the patient evidently got paralysis of the portio dura from exposure of one side of the face to cold. Of course this paralysis was attended with distortion of countenance, in consequence of many of the muscles of the face depending on the portio dura for their supply of nervous energy. But what was particularly remarkable in this case was, that vision on the affected side of the face became dim and indistinct. Now, can this be explained? Yes, very easily. You all know that the branches of the portio dura have an extensive communication with the suprà and infra-orbital branches of the fifth. Now the paralysis which commenced in the portio dura, gradually extended to the branches of the fifth, and through them to the optic nerve, with which the fifth is intimately connected, and hence it was the retina became finally deranged in its function, and dimness was produced.

There is one circumstance more to which, as I am on the subject of amaurosis, I shall briefly call your attention. You will recollect the case of a boy whom we have had very recently under treatment for amaurosis, and may, perhaps, remember that one of the remarkable points in his case was this:—When he looked straight forward, he did not see anything in the direction to which his eyes were turned, but he could see the objects that were considerably below, or to either side of the axis of vision. There are two or three circumstances under which a person cannot see an object by looking directly at it, and I wish to state these circumstances. In the first place, it may happen that an opaque spot may be situated on the centre of the cornea, and directly in the axis of vision, as we sometimes see in cases of scrofulous ulceration followed by permanent opacity of the cornea. Now, in this case, it is plain that the person cannot see objects placed directly before him, and in the axis of vision.

The second case is where the patient cannot see objects directly before him, but can distinguish them tolerably well at an angle of obliquity, the cornea being perfectly clear and uninjured in its texture. Now, this may arise from an opacity of the lens, limited to its centre, and not generally diffused through its substance. The lens is a compound body, the structure of which was, until very lately, but little known. When the lens or its capsule is affected with opacity, this opacity is not always equally diffused, but sometimes occupies the central portions of these organs, while the circumferential portions retain their transparency. Hence, when a person under such circumstances wishes to see an object, it is necessary that the rays of light should fall obliquely in order to reach the retina. A third case is where, although the cornea and crystalline lens are in the natural state, still the patient sees objects a little removed from the axis of vision much better than those which are in it; as in the case to which I have just alluded, where the patient could scarcely distinguish any object placed before him, but could see tolerably well objects at either side of, or below the direct line. The reason of this appears to be, that when a person so circumstanced looks directly at an object, the picture of the object falls on a part of the retina not obedient to the stimulus of light.

In the process of ordinary vision, the parts around the axis, and corresponding to the field of vision, have the picture of the object looked at painted on them, and vividly and strongly illuminated. The central portion of the retina bears on it the picture of the object which the mind attends to; for it is surprising how indistinct, and how little attended to, any object seen obliquely is. Now, where disease has rendered this central portion of the retina insensible to light, then the attention is immediately turned, with a greater degree of intensity, to the sensations derived from the surrounding portions, and the patient is enabled, so long as this portion retains its sensibility, to enjoy the sight of objects placed obliquely, and not in the axis of vision. Even in healthy eyes the non-central portions of the retina may be rendered available in particular cases. This has been proved by Brewster, Herschel, and others. In looking, for instance, at a star of the smallest magnitude, it vanishes from the sight and is lost when looked at directly, but if you turn a little from it, it will still catch the eye and be visible, because the image of the star will now fall on a part of the retina which is generally in darkness, and which is more sensible from being unaccustomed to the glare of light. Hence, in many cases of amaurosis, it is not unusual to find that the patient retains the power of vision, so far as regards objects placed at an oblique angle with the axis of the eye, after direct vision has been all but extinguished. This is all I have to say at present with respect to amaurosis.

In my lecture on Inflammation I brought forward proofs that the views commonly entertained of the forces which carry on the circulation in the human body are incorrect, and endeavoured to show that, besides the contractile force of the heart and larger arteries, the human system possesses a power by which alone the circulation is carried on in plants and in the inferior animals, that is, the power residing in the capillaries and smaller arteries. I endeavoured also to prove that the capillaries exercise a remarkable influence in the process of inflammation, and that the part they play is independent of any force derived from the heart's action. Now, that the smaller vessels of a part possess an extraordinary power in modifying its circulation, independently of any *vis a tergo,* is rendered quite plain by the phenomena observed in all erectile tissues, in the clitoris and penis, mammæ, &c., &c.

Professor Müller and Dr. Houston have endeavoured to show that there are provisions in the veins and arteries calculated to favour the rapid afflux of blood to these tissues; but their explanations are quite insufficient to account for the phenomenon, which remains a striking instance of the power possessed by the nerves and arteries of a part in producing a great and instantaneous change in its circulation, independent of any impulse from the heart; and the fact can be only explained by supposing that the vital influence of each part has the principal share in modifying its own capillary circulation. The cases I am now about to relate briefly all bear upon this question.

The first is that of a young lady who had the catamenia suppressed at the age of sixteen, and who had been for some time in a bad state of health. After an accidental diarrhœa, which weakened her greatly, she became subject to a very curious affection of the feet and legs. The attack generally commenced at night, involving the foot, ankle, and leg, half way to the knee. It is generally confined to one foot and leg at a time, and when it subsides in one extremity begins in the other. The affection commences with heat and tingling of the sole of the foot, then of the instep, ankle, and leg, as high as the middle of the calf. These symptoms go on increasing for some time, the sensation of heat becomes extreme, and the pain agonizing. In proportion to the increase of these symptoms, the vascular congestion and fulness of the limb are augmented—the smallest veins are rendered distinct, and the larger ones become prominent. This state lasts for eight or nine hours, the sensation of heat and pain being all the time nearly insupportable.

The resulting congestion of the cutaneous capillaries occasions a change in the skin, which, as the fit proceeds, grows at first red, and then gradually assumes a more suffused appearance and a deeper hue, until it becomes swollen, smooth, and shining, and resembles very much in colour a black cherry when nearly ripe. When the hot fit ceases, the slight swelling and this discolouration subside, and the affected parts remain during the next stage pale, deadly cold, and comparatively free from pain. While one leg is in the hot stage, the opposite leg is cold and pale, but free from pain; but as soon as the pain and heat have disappeared in the limb first affected, the same series of phenomena commences in the other leg, and lasts for the same length of time, after which both limbs are in their natural state, and for two or three hours she is comparatively free from suffering, although some uneasiness still remains, which she compares to a numbness or some such morbid sensation not easily defined. This disease commenced in 1837, and its paroxysms have returned every day since. At first the pain was intolerable, and the daily amount of ease she enjoyed did not exceed three hours. This occurred quite regularly, beginning about four, and lasting until seven o'clock in the morning, during which three hours she had some sleep. Now (October, 1840) the intermission occurs at eleven a.m., and continues until seven in the evening. In 1837 she could not sleep at all when either foot was in the hot fit, so great was the pain; now she enjoys tolerable rest at night, although one or other of the extremities is in the hot stage during the whole time she is in bed. She is much improved in appearance, and though of slender form and tall, she has become sufficiently fat; and being a person of most placid temper and great beauty, no one who sees her in the drawing-room, apparently in all the bloom of health, would suspect her to be such a martyr; even now she is obliged to sit or recline on the sofa during the entire day, for if she walks much about the room, the hot fit in her limbs is immediately brought on. The suppression of the catamenia made us at first consider this strange affection as a variety of hysteria, but in about six months the female function resumed a perfect regularity, without bringing the slightest alleviation of the symptoms.

Neither could we attribute the continuance of the disease to any particular constitutional defect, for though her form was slender, her aspect was healthy, and her general state of health was better than could have been expected, considering her nearly unceasing pain and almost total want of sleep. In order to convey a more accurate idea of this singular malady, I shall read some extracts from letters written to me by her mother, a lady of great intelligence, who, at the risk of sacrificing her own health, has attended her suffering child night and day, during her illness, with that assiduity which none but a mother can exhibit.

"January 10th, 1837.—I do not think she has recovered the effects of an obstinate toothache on her general health. Her appetite is completely gone, and her looks indicate extreme delicacy; besides, her poor feet were particularly hot and inflamed, and continue now severely affected by the intense coldness of the weather. Frost and snow and fearful storm have prevailed here of late, and we have not had our sufferer out for some weeks, which is greatly against her.

"I cannot say that there is any change in the appearance of the limbs, nor in the description of pain, save that they smart very much during this frosty weather, and we cannot assist to cool them as much as we would, lest the cold water would cause any breaking of the skin."

In explanation of the above, I have to observe that, during the hot state, the only thing which afforded the least relief was cold water; cloths, dipped in the coldest water that could be procured, were applied to the feet and legs constantly during the night.

Sometimes the extreme severity of the pain was diminished by patting, or gently touching with the hand the affected parts, and her attendants used to spend hours together in affording her the alleviation so obtained.

"23rd March, 1838.—So far from being in the least relieved, the limbs are now unceasingly in a state of swelling particularly distressing; and, whether cold or hot, alike; and both stages of this most extraordinary complaint are now attended with acute pain and extreme *discolouration* far beyond what they were in Dublin.

"Her nights are worse, and extreme exhaustion and lassitude are visible during the day, and depression of spirits hourly increases. Assurances of ultimate recovery and future ease are alike unheeded by her, and I am myself greatly distressed.

"Indeed I look on her present state as much more alarming than heretofore; it is quite evident the constitutional effort has not in the least relieved her feet; and the extreme swelling is, in my mind, very alarming.

"Her appetite is daily declining; I am seriously unhappy about her.

"The skin shines just as if in erysipelas; the soreness to the touch becomes greater than usual."

"April 26th, 1838.—No improvement in her health seems in the least to affect her limbs.

"The determination of blood has quite returned to its former course; the rush is sudden, and rapidly extends to the toes now, instead of tarrying awhile at the instep and heel, as for a time it seemed to do.

"The heat is quite as great as when in Dublin, but the cold stage is more painful. The cold and numbness are now felt all the way up the legs; *before*, it was only from the ankles over the foot; and should the patient recline on a bed or sofa during the cold stage, the sensation on rising off either is particularly distressing.

"The veins each morning, on leaving bed, are distended just as you have seen them, and the livid hue overspreads the feet as then; and, also, when cold. The only application we use is milk and water, and patting them frequently; but even that alleviation my daughter cannot have as heretofore, for, from the extreme tenderness of the parts, the slightest touch pains her.

"Swelling of the feet sometimes continues throughout the entire day, and generally the hot fit is more protracted than formerly; never less than twelve or fourteen hours, and often more.

"My daughter now experiences a tendency to *palpitation* which she had not before, and this arises frequently without any particular cause, although the entrance of a person unexpectedly or suddenly into the room would excite it. And when the palpitation of the heart comes on, there is a *similar feeling* experienced in the limbs, especially from the calves of the legs down, as though *palpitation* was *there* also. Going up stairs does *not* bring on this palpitation, which one would suppose it might do.

"The bowels require assistance as formerly, but magnesia is quite sufficient, given once a week; however, the two last times we have perceived greater sickness attended, and extreme debility all through the day after. Flushings of the face are very frequent, and sleepiness ensues after the mid-day glass of wine, though usually the wine is diluted with water. Generally speaking, her looks are decidedly improved, though she is not fatter than when in Dublin. She has now scarcely a hope of ever being relieved from this most distressing determination to the limbs; though in general she is enabled to bear up with surprising cheerfulness, and occupies herself in various useful ways.

"A short drive yesterday (the first fine day for a length of time) fatigued her, but did not induce more sleep at night.

"When in conversation, we were led to reflect that it was just after the severe attack of *diarrhœa in September last* that this extraordinary determination *commenced;* we think, perhaps, it was entirely consequent on it, and would again ask you, my dear sir, could this have been the case, and how? This idea is completely fixed in the mind of your patient."

"May 7th, 1838.—I grieve to be obliged to continue my detail of suffering; painful nights without sleep, are succeeded by days now scarcely less painful, as the heat and swelling seldom abate.

"Discolouration and swelling are general all over the feet, ankles, and instep. At the back of the legs, just at the commencement of the calves, a lump appears to form, owing to the determination there; and the backs of the legs, from that up to the knee, are particularly hard to the touch; and this is not in the veins alone, as formerly, but generally all over. The appearance of the feet, and toes especially, is shining, as if in erysipelatous inflammation; at least, I have witnessed similar appearances under such.

"Extreme weight in the limbs, both when hot and also when cold. The coldness is quite as great as when in Dublin; the burning heat equally in an extreme. The pain sets in with the slightest approach to warmth, and the cold stage is no longer one of comparative ease, as last winter; for the sense of weight is as great as when heat prevails, and walking about the room induces swelling at once, even though it might have subsided beforehand.

"I think your patient by no means improving as to appetite or general strength *at present;* the slightest exertion evidently overcomes her; the kidneys act very scantily, and the discharge very muddy and of a reddish hue; the sediment of a white and reddish hue also. Bowels require assistance every fourth or fifth day; magnesia now excites extreme sickness; even faintishness attends each action of the bowels after it."

"May 25th, 1838.—I am sure you will be concerned to hear that I have not more cheering intelligence to detail respecting your patient here, than when I last wrote to you.

"I think, on the whole, the determination to the feet has been greater than before; the swelling more general over the ankle and entire foot, and discolouration equal when cold as during the hot stage, attended with shining appearance of the skin, which really alarms me to look at; pain great as ever; and the last few mornings violent pulsation or throbbings in the heel.

"On first arising out of bed in the morning, she feels as though the veins at the back of the legs, toward the calves, were cutting asunder by some sharp instrument. Walking evidently increases the determination downwards, and excites the pain and swelling more than any other thing; yet *walking* would be her *favourite* exercise, if she could use it to any comfortable extent. When taking a drive in the carriage, she gets a great pain in her left side; headaches are frequent, and her complexion very variable during the last fortnight. Bowels have not acted at all, *unless assisted,* since I last wrote to you; and, after magnesia on Wednesday morning, extreme pain and sickness ensued, and a number of constipated lumps came away. Appetite is far from good; thirst increases greatly; her wine in the middle of the day causes immediate flushing, and a disposition to perspire over the hands, face, and neck, all evincing extreme debility. She often feels as though a stream of water, icy cold, was rushing down through her limbs, and, when rising from her chair during the cold stage, feels as though she stood in snow."

The preceding details, extracted from some letters written by the patient's mother, will convey to you a more accurate idea of her sufferings than could be imparted by any description of mine. It is remarkable that the disease of her feet was not accompanied by the least derangement of her general circulation, or of the state of the rest of her skin.

This young lady was frequently seen by Sir Philip Crampton, Mr. Colles, and Mr. Cusack, and her case excited in their minds the greatest interest, for they had never witnessed anything similar. At first, chronic inflammation of the arteries in the limbs was suspected; but this suspicion was set aside by the subsequent duration and course of the malady.

No plan of treatment, whether general or topical, which afforded the slightest prospect of relief, was neglected. Every variety of lotion, cold and hot, stimulating or narcotic, of ointments, bandages, poultices, affusion, were successively tried, and the parts were often leeched in the hot stage, but without any relief. Internally, quina, arsenic, iodine, hydriodate of potash, chalybeates, purgatives, diuretics, and mercurialization have all successively failed, nor has she ever received the slightest benefit from any anodyne medicine whatsoever. From the resemblance which the derangement in the circulation of her limbs bears to that produced by ergot of rye, I was led to try that medicine, but it did not produce any notable effect on the disease. It is curious that this long-continued derangement in the circulation of her lower extremities, and the extraordinary pain she has experienced daily for the last six years, have not produced any paralysis, any diminution of muscular power, thickening of the skin, induration of the subcutaneous areolar tissue, or stiffness of the joints. Considering how hot, red, and swollen a considerable portion of each limb is during many hours every day, it is quite surprising that no evident alteration of structure was the result. This fact is extremely interesting in a physiological and pathological point of view, proving, as it undoubtedly does, that changes in texture are influenced by causes quite independent of the state of the local circulation.

In general, we observe that increased sensibility of the nerves of any part, when long-continued and severe, is followed by a proportional paralysis of sensation; but, in the case before us, the cutaneous nerves of the leg have been exquisitely painful for years, and yet not the least approach to paralysis, either of sense or motion, is perceptible.

In 1843, when the first edition of my *Lectures on Clinical Medicine* was published, I inserted in a note the following account of the last report I had of this young lady's state:— The disease still continues without any intermission, being, as before, much worse in winter; but, on the whole, the pain is not so severe as formerly, and the daily paroxysms are of shorter duration. In proportion as the pain and intensity of the heat have somewhat diminished, her general appearance and health have improved.

Since then I have received numerous communications from several parts of the world—England, America, &c.—suggesting the most varied plans of treatment, and the most different opinions as to the cause of this affection. But although nearly every remedy in the pharmacopœia was tried, none seemed to have had the least effect; and she gradually got well, I might almost say, in spite of medicine, and has now been quite free from the disease for more than twelve months.

Although I myself have not witnessed anything precisely similar to this case, yet I have seen a few local affections which presented some analogous symptoms: one of these I shall now briefly describe. I saw it with Mr. Moore of Anne Street, who, at my suggestion, kept accurate notes of the progress of the patient, who was visited also occasionally by Sir Philip Crampton.

Mrs. ——, aged 82, of a robust, healthy constitution, and florid complexion, in the month of February, 1839, had a slight paralytic affection of the left arm and leg, preceded and accompanied by headache, vertigo, flashes of light before the eyes, &c. About a month ago she experienced a sensation of cold in the right foot, which, on rubbing the part, gave place to a feeling of heat and itching; on examination, she found that the anterior half of the foot was swollen and red. In about three weeks from the first seizure, the sensation of cold continuing, it became extremely painful, and she then first applied for medical advice.

August 1st, 1839.—Complains of severe pain in anterior part of right foot, which is swollen and red; there is considerable œdema of the ankle and lower part of the leg; the extremities of the toes are dark red with some lividity. Her general health is good, with the exception of occasional headache with vertigo. Bowels free; appetite good; pulse regular. She was ordered a stimulating liniment, and internally small doses of hydriodate of potash.

5th.—She experienced much relief from the use of the liniment. The œdema about the ankle is much less, but the swelling of the anterior part of the foot continues nearly as before.

13th.—The great toe has to-day a peculiar shining and *bloody* appearance, the fourth is livid at the extremity, the second and third are red, but not livid. Four leeches were applied to the great toe, followed by a poultice of bread, milk, and oil to the foot; it was impossible to get the leeches to take on the other toes, in consequence of the recent use of belladonna ointment.

15th.—The toe to which the leeches were applied has been completely relieved, but the livid appearance of the fourth still continues; second and third appear much swollen, and are very painful; ordered to apply two leeches to each, and one to fourth.

17th.—Considerable pain last night. We thought now that the pain, redness, and swelling exhibited exacerbations recurring every second day, and we accordingly gave her quina in small doses, and again leeched the toes. As the quina disagreed with her stomach, it was administered every night in a starch injection, with a few drops of laudanum, and continued for a week; while the toes most affected were repeatedly leeched, and various soothing and anodyne applications tried. The pain was of a most excruciating character, and its exacerbations, though not regularly periodical, showed a decided tendency to return every second morning at a given hour. Sometimes one toe, and sometimes two or more, were simultaneously attacked, and in proportion to the intensity of the pain, the affected parts became swollen, red, and then of a shining purple hue. Such was the course of the disease from the 1st of August to the 15th of September.

On that evening Sir Philip Crampton saw her, and the following medicines were ordered:—

℞. Misturæ Camphoræ, f℥j.
Vini Radici Colchici, min. xx. Misce; fiat haustus ter in die sumendus.

℞. Decocti Papaveris albi, Oi.
Extracti Conii, ℥ss.
Extracti Opii aquosi, gr. x. Misce; fiat solutio pro cataplasmate.

Sept. 16th.—Pain completely relieved.

17th.—The pain returned this morning at four o'clock, but not so violent.

Repetatur haustus.

30th.—The foot has been since last report gradually assuming its natural appearance; there is now very little swelling or lividity. The pain has not latterly been so intense, and is of a different character, being described as resembling the sensation experienced when the circulation is returning in a limb which had been "asleep." The accessions are now generally in the evening, to which they have gradually come, occurring at three, two, one, twelve o'clock, and so on. Applications which formerly gave great relief are now followed by intense pain, and cannot be borne, as anodyne liniment; the application of fresh hemlock bruised was also intolerable. Emollient applications, as chamomile stupes, bread-and-milk poultices, give most relief; general health is good; is at present using effervescing draughts with tincture of orange-peel.

October 7th.—The foot has not been painful since last report, and its appearance now is as nearly as possible natural.

Soon after this, she got a slight paralytic stroke, followed by more severe attacks of an apoplectic nature, and expired in consequence of cerebral disease on the 25th of November.

It is obvious that the good effects of the colchicum may excite the suspicion that the inflammation was of a gouty nature; still, however, the manner in which it so gradually began, the remarkable violence of the pain, and the change of colour in the skin which accompanied each paroxysm, were of so striking a character, and presented analogies with the case of the young lady before related so obvious, that I have thought it right to place the history of the two cases side by side.

The absence of dyspepsia, and all constitutional or local symptoms of gout, up to the age of eighty-two; the freedom from gouty deposits, which the urine exhibited throughout the whole course of the old lady's malady; and various circumstances that cannot have escaped your notice, render the hypothesis which scribed her suffering to gout more than doubtful; and the doubt is still further increased by the very gradual manner in which the disease subsided under the use of colchicum, and its preserving its "tertian" character to the end.

The affection of the foot and toes was so painful, and the discolouration and purple hue of the skin so intense, that we naturally apprehended its terminating in something like *senile gangrene.*

Let me now direct your attention to the case of a child about four or five years old, who has been for some time in the fever ward, and has been recently attacked with a very formidable disease, *cancrum oris.* Like most patients labouring under this malady, she had been previously debilitated by the occurrence of fever; for a child in good health seldom, indeed I may say never, gets an attack of this kind. A preceding febrile condition of the system, and a depraved habit of body, must have existed in every case where cancrum oris occurs. The disease itself is nothing more than mere local inflammation setting in under unfavourable circumstances, and during a morbid state of the system; and hence the local inflammation rapidly assumes the gangrenous character. In children, many forms of general disease are apt to bring on a state of the system in which inflammation of any part has a strong tendency to run into gangrene, and this is to be borne in mind with reference to the present case, for cancrum oris has nothing peculiar in it except its situation.

It is not my intention at present to enter into any particular description of this disease; it has been well described by many surgical writers, and you will find a very valuable essay on the subject published by Dr. Cuming in the fourth volume of the

Dublin Hospital Reports. There is also a very excellent article on cancrum oris in the *Cyclopœdia of Practical Medicine*, to which I beg leave to refer you. It may, however, be necessary to allude briefly to some points connected with its treatment. In the first place, I may observe, with reference to the general principles of treatment, that you should not be misled by the name of the disease, or think that because there is a gangrenous condition present, you should rely exclusively on detergent and antiseptic remedies. This is a common but pernicious error—it is the error of prescribing for names and not diseases, the easy but dangerous practice of unreflecting empiricism, by which the reputation of medicine has been so often damaged. He who commences the treatment of cancrum oris with the internal and external use of antiseptics is acting on false principles; his practice may have the sanction of time, but it has not the support of observation and experience. In the early stage of the disease, when the cheek is of a deep red colour, tense, prominent, and shining, I do not know of any means which tends so directly to diminish the amount of inflammation, and check the progress of gangrene, as the application of leeches, few in number, but frequently repeated. This is the mode of treatment which I have found to be most effectual, and which, from my experience of the disease, I can recommend as the most likely to prove beneficial, when, unfortunately, the ordinary resources of medicine are too often ineffectual.

With respect to internal remedies, Dr. Cuming lays great stress on the utility and value of purgative medicines. They may be certainly necessary, and as the little patients very often swallow the sanious discharge from the ulcer, more or less derangement of the intestinal canal must accompany the disease. But along with purgatives I would strongly recommend the use of sulphate of quina, either in the form of enema, or, if the child can be got to swallow it, made up into a syrup, and its solution flavoured by the addition of a little sulphuric acid. With regard to the external applications, you have a choice of many remedies, each of which you will find recommended by authors, but none of which can be exclusively relied on in any case. The balsam of Peru with castor oil forms a good application, or you may blend it with honey, as we did in this case—one ounce of the balsam to two ounces of honey. You may also employ washes composed of solutions of nitric or muriatic acids, or of the chlorides of soda or lime.

In the present instance the sore has, in spite of all our efforts, eaten its way from the internal to the external surface of the cheek. On Saturday, the centre of the cheek was characterized by the appearance of a bluish-black spot, indicating the occurrence of sphacelus. In the meantime it was curious to observe how little constitutional disturbance was yet produced; the child, notwithstanding the manifest existence of extensive sphacelation of the cheek, continued for several days to have a tolerable appetite, and to sleep well, being nearly free from fever, and complaining but little; as the mortification progressed, destroying rapidly the external parts of the cheek, &c., matters soon altered, and the poor little patient sank, exhausted and suffering.

I shall next shortly refer to the boy Cartney, aged 12, who was admitted into the hospital labouring under the following symptoms, which he stated were only of three days standing. He complained of pain in the lower part of the neck, just above the sternum, and extending outwards under both sterno-mastoid muscles, and which was much increased by pressure. There was very little swelling; the space between the two muscles just named, at the lower part of the neck, appeared full; there was no redness or œdema. Just above the sternum there was inflammatory induration, but no soft point was detected. The chin was approximated to the chest, and any effort to bend the head backwards was attended with pain. He complained of pains of a lancinating character shooting up and down through the lower part of the neck, and when these were most severe, the muscles of the face were thrown into strong spasm, resembling their condition in tetanus. His breathing was hurried and difficult; but he *had no stridor*. He complained of dysphagia. There was no enlargement of the tonsils, or œdema of epiglottis or uvula; skin hot; pulse 112, very small; no cough. He died the next morning, previous to which he had an attack of convulsions.

Post-mortem.—The integuments and muscles were dissected so as to expose the thyroid gland. This body presented its usual appearance, except that it was pushed forward, and was more prominent than is commonly noticed. On dividing a strong fascia on one side of the gland, a large quantity of extremely fœtid pus, of thick consistence and greenish colour, escaped. The thyroid gland being divided, an abscess about the size of a hen's egg presented itself, lying behind that gland and in front of the trachea. This abscess communicated with two others, one on the right side of the trachea and the other on the left; that on the right extended between the trachea and œsophagus; the one on the left did not go in between these tubes, but advanced upwards. They both contained the same kind of matter as that already described. Forming part of the contents of the abscess on the left side was the recurrent nerve, completely dissected from surrounding parts, up to where it gets under the inferior constrictor of the pharynx; here it presented a reddish hue and seemed enlarged.

These abscesses had no communication either with the trachea or œsophagus.

Before concluding, I just wish to mention a singular case of mobility of the sternum, which was seen by Dr. Stokes and myself. A medical student, 19 years of age, and of a sanguineous temperament, who had often been attacked by violent pectoral inflammation, particularly a few years ago, but who had since become comparatively healthy and robust, applied to me for advice concerning a pain in his chest. This happened after lecture in Sir Patrick Dun's Hospital, in the presence of several of the students and Dr. Law, who saw with astonishment this young man open his shirt, and with his hand push the sternum deep inwards towards the spine, so as to convert the anterior part of the chest into an extensive and by no means shallow cavity, at the bottom of which was the sternum. The rapidity with which this was effected, and the unnatural appearance the chest then presented, excited a most disagreeable feeling of alarm in the minds of the spectators; for we could not avoid dreading that he was inflicting on himself some serious injury.

The portion of the chest which yielded in this singular manner to pressure comprised the sternum from within two inches of its superior edge, and seemed below this point to be limited laterally by the lines answering to the junctions of the cartilaginous with the osseous portions of the ribs, so that the whole space capable of being pressed inwards was nearly triangular in shape, and was very extensive. The sternum was so tender to the touch, that in applying the pressure he was obliged to press at some distance at each side of this bone. When the pressure was carried to the farthest point, the sternum was pushed in, as nearly as we could guess, about two inches, and the action of the heart, as well as that of the subjacent lung, appeared to be notably diminished, and in consequence of this the pulse was weakened. This young man was subject not only to constant pain in the sternum, but likewise to frequently recurring violent palpitations of the heart. His chest was sufficiently ample and well formed, but he had lately become round-shouldered, in consequence of his seeking relief from pain by stooping forwards. No other portion of his osseous system exhibited the least trace of softening. The only affection which I can call to mind the least resembling this, is the softening which sometimes affects the female pelvis, giving rise to great distortion, and which softening is accompanied, during the months or even years of its formation, by severe pelvic pains.

LECTURE LXIX.

SLEEPLESSNESS IN DISEASE.

SLEEPLESSNESS is a very curious result in disease. It accompanies certain morbid conditions of the system brought on by active disease or by grief, care, and various other forms of mental disturbance, continues to harass the unhappy sufferer night after night, and frequently resists the most powerful and decided narcotics. I do not intend to enter into any inquiry respecting the different states of the constitution in which it occurs; my purpose is merely to offer a few practical remarks on the more obvious and striking examples, with the view of illustrating the cases to which I wish to direct your attention.

There is a form of sleeplessness which is frequently the precursor of insanity, and which has been well described by Dr. Adair Crawford. The watchfulness in such cases is accompanied by the well-known symptoms of incipient mental derangement, and its treatment is therefore inseparably connected with that usually resorted to in cases of threatened insanity, and embraces the employment of means moral as well as physical. Of these it is not my intention to speak; I may observe, however, that Dr. Crawford has found opium, gradually increased to very large and frequently-repeated doses, so as to produce sleep, the best remedy.

In a case of jaundice in the hospital, the patient, an old man, passed several nights without any sleep. He was just beginning to recover from the jaundice when this new symptom appeared, and I directed your attention particularly to the circumstance, because every manifestation of nervous derangement connected with jaundice should be carefully watched. It frequently happens that jaundiced patients sleep too much, and in some cases the disease is accompanied by convulsions, succeeded by coma—most alarming symptoms, and almost invariably the harbinger of a fatal termination. Sir Henry Marsh was the first who directed our attention to the great fatality of those cases of jaundice in which convulsions occur; I have seen but one instance of recovery. It was in the case of a gentleman, labouring under icterus, very considerable hepatitis with enlargement of the liver, anasarca, and ascites. He was treated by Dr. Osborne and myself, and had at least a dozen long and violent convulsive paroxysms, ending in coma, succeeded by temporary forgetfulness and fatuity. Repeated leeching of the right hypochondrium, active purgation, and mercurialization of the system removed all the symptoms of disease, and he slowly but perfectly recovered. Dr. Griffin, of Limerick, has detailed the particulars of some interesting cases of this nature in the *Dublin Medical Journal.* You perceive, therefore, that in jaundice everything denoting an unusual state of the nervous system, whether it be too much sleep or too little, demands your attention.

In this man's case the jaundice was the result of an attack of hepatitis. We treated it with leeches, blisters, and the use of mercury, and in the course of a few days the stools became copiously tinged with bile, and symptoms of improving health appeared. At this stage, the dejections being bilious, but the jaundice still remaining, he began to exhibit symptoms of restlessness and irritability, and finally became perfectly sleepless. Here, gentlemen, we had to deal with a new symptom, extremely harassing to the patient, and likely to react unfavourably on the original disease. As a preliminary step, I determined to evacuate the bowels, and for this purpose I prescribed a purgative draught, consisting of five ounces of infusion of senna, half an ounce of sulphate of magnesia, a drachm of tincture of senna, and a scruple of electuary of scammony. My object was to purge briskly, and then give a full narcotic. In all cases of jaundice depending on hepatic derangement, after you have succeeded in producing bilious evacuations, you should never omit prescribing an active aperient every second or third day for the space of ten days or a fortnight, with the view of carrying off the remains of the disease so as to prevent the occurrence of a relapse. Hence you will find such cases very much improved by the use of Cheltenham water, taken every day for three or four weeks *after the reappearance of a bilious tinge in the alvine discharges.* The stimulus of the purgative causes an increased flow of bile into the intestines, which removes the hepatic congestion, and carries off what is popularly termed the dregs of the disease, and promotes a rapid and complete recovery. It is a simple but successful practice, and I would advise you never to omit its employment in cases of this description.

With respect to purgative mixtures, I may observe that you should prescribe a larger quantity of the infusion of senna than is generally ordered, if you wish to secure its certain and decided operation on the intestines. Hospital nurses, who reason from facts and experience, know this, and when directed to give a senna draught they always give a small teacupful. They administer from four to six ounces at a time, and I have observed that in this way the action of the medicine is more certain, and the benefit derived from it more extensive. I am convinced that the usual mode of giving this valuable purgative in private practice is bad; the quantity given is too small, and consequently it is necessary to repeat the dose several times, a mode of proceeding apt to occasion much nausea and griping; I would therefore recommend a quantity varying from three to six ounces to be administered in all cases where the patient's condition will admit of free purging. Mr. Kirby is in the habit of ordering purgative mixtures in chronic cases to be taken at bed-time, and not, as is usually done, in the morning. He asserts that their action is milder and less irritating to the bowels when the patient lies in bed and is asleep until the period of their operation, than if he were up and about.

After the purgative had produced four copious discharges, I prescribed eight minims of black drop, to be taken at a late hour in the evening. Whenever I give opiates to procure sleep, I always observe the rule laid down by Dr. M'Bride (formerly a celebrated physician of this city), to select the period at which nature usually brings on sleep, and which varies according to circumstances and the habits of the patient. Whenever you have to deal with watchfulness in patients labouring under morbid states of the constitution, as, for instance, hectic, inquire when the tendency to sleep usually occurs, and administer your narcotic about an hour or two before its occurrence. It is between three and five o'clock in the morning that the inclination to sleep is strongest; it is about this time that sentinels are most apt to slumber at their posts, and consequently attacks upon camps or cities, made with the intention of effecting a surprise, are usually undertaken about this period of the morning. How well marked is the periodic tendency to sleep at this hour, in all patients labouring under hectic fever produced by whatever cause! How often do we hear the poor sufferer complain of restlessly tossing about in his bed until three or four o'clock in the morning, when at last sleep, welcome although uneasy, for a few hours separates the patient from his pains! If given at an early hour in the evening, the effect of the opiate is not coincident with this periodic attempt of the constitution, and it fails in producing sleep; but if exhibited at a late hour, it begins to produce its soporific effect at the very time when nature inclines the harassed sufferer to repose, and the result of these combined influences is a deep, tranquil, and refreshing sleep. By observing this simple rule, I have often succeeded in producing sleep in cases where various narcotics had not only failed, but even added considerably to the irritation and discomfort of the patient.

In cases of sleeplessness, where you have administered an opiate with effect, be careful to follow it up for some time, and do not rest satisfied with having given a momentary check to the current of morbid action. To arrest it completely, you must persevere in the same plan of treatment for a few days, until the tendency to sleep at a fixed hour becomes decidedly established. You must give an opiate the next night and the night after, and so on for five or six nights in succession; and where the watchfulness has been of an obstinate and persistent character, narcotics must be employed for a longer period and in undiminished doses. I do not allude here to the sleeplessness which accompanies confirmed hectic and other incurable diseases; such cases require a particular mode of treatment, and generally call for all the varied resources of medicine. But in those instances of watchfulness which are frequently observed towards the termination of acute diseases, it is always necessary to repeat the opiate for some time after you have succeeded in giving a check to this symptom. You need not be afraid of giving successive opiates lest the patient should become accustomed to them, and a bad habit be generated, for the rapid convalescence and renewed health which are wonderfully promoted by securing a sound and refreshing sleep, will soon enable him to dispense with the use of opiates.

Another disease in which sleeplessness is a prominent symptom is delirium tremens. We have had an example recently in our wards, and you have seen the means employed to overcome it. The patient came into hospital with symptoms of extreme nervous excitement and watchfulness, which had continued for some time, and were brought on, as is most commonly the case, by repeated fits of intoxication, succeeded by a pause of perfect sobriety—in Irishmen the result of necessity or accident. In this man you must have remarked the signal benefit which attended the use of a combination of tartar emetic and opium, and how rapidly the watchfulness disappeared.

There is, however, one form of nervous irritability, frequently observed in persons who are in the habit of drinking freely, but without running into excess, and presenting, as it were, a shadow of delirium tremens, on which I shall make a few remarks. This curious state of the nervous system is generally found to exist in men about the middle period of life, and who consume a larger quantity of spirituous liquors than they are able to bear. Such persons, without suffering in appearance, or losing flesh, get into a chronic state of disturbed health, manifested by nausea, and even dry retching in the morning, loss of appetite, and impaired digestion; but in particular by a deranged and irritable state of the nervous system, and by watchfulness. This forms one of the most distressing symptoms, and the patient generally complains that he cannot get any sound and refreshing sleep, that he lies awake for hours together, and that when he slumbers, his rest is disturbed by disagreeable dreams, or broken by slight noises. How are you to treat this affection? I can give you a valuable remedy for this deranged state of the constitution—one which I have often tried, and which from experience I can strongly recommend. It is a mixture composed of tincture of colomba, quassia, gentian, and bark—say an ounce of each; and to this is added a grain, or even two, of morphia. A compound tincture, somewhat analogous to this, is much in use among military gentlemen and others, who have resided for a considerable time in India, where, from the heat of the climate, and the prevalence of intemperate habits, the stomach becomes relaxed and the nervous system irritable, so as to represent, in a minor degree, the symptoms which characterize delirium tremens. You perceive I combine several tonics to form this mixture, because they are well known to produce a more beneficial effect when combined than when administered singly; and I add to these a narcotic, which has the property of allaying nervous excitement without derangement of the intestinal canal. The dose of this mixture is a teaspoonful three or four times a day, and the best time for taking it is about an hour before meals. It gradually removes the nausea and debility of stomach, lessens nervous irritability and watchfulness, and with a proper and well-regulated diet, and attention to the state of the bowels, I have seen it produce excellent effects. In such persons much benefit is derived from the use of the tepid shower bath.

Fever is another disease in which sleeplessness is a symptom, frequently of an unmanageable character, and pregnant with danger to the patient. You witnessed this in the case of the boy who lies in the small fever ward, next to the man who is at present labouring under general arthritis. This boy had fever of a mild description, and unattended with any bad symptoms. His case scarcely required any attention, and he had almost arrived at a state of convalescence without the aid of medicine, when he began to lose his rest, and absolutely became sleepless for several nights. I beg your attention to this case for many reasons. In the first place, you have seen that we tried many remedies without success, and afterwards fortunately hit on one which answered our purpose completely. Let us examine the nature of the medicines prescribed, and our reasons for giving them.

In the first place we gave, as in the case of jaundice, an aperient followed by a full dose of black drop. It failed in producing any sleep; we repeated it a second and a third time, but without the slightest benefit. I then remarked to the class that, as I had noticed the good effects resulting from a combination of tartar emetic and opium, in the case of delirium tremens, where opium alone failed in procuring sleep, it would be proper to give this remedy a trial. I observed, at the same time, that I was convinced that the preparations of antimony have a distinct narcotic effect, and that I had seen patients in fever whose watchfulness had been removed by antimony given in the form of tartar emetic, or James's powder. I said it was my firm impression that tartar emetic, along with its other effects, exerts a decided narcotic influence on the system, and that it is this which makes it so valuable a remedy in treating the sleeplessness of fever and delirium tremens. Our predecessors were much in the habit of using antimonial mixtures in the treatment of fever;

and they did this, because they knew by experience that these remedies worked well. It is at present too much the fashion to decry their practice, and, in this instance, I think with very little justice.

In this boy's case, however, the combination of tartar emetic and opium did not succeed in producing sleep. Having thus failed in our first and second attempts, we had recourse to the liquor muriatis morphiæ—a preparation first brought into use by Dr. Christison, and now official in the Edinburgh Pharmacopœia. It is equal in strength to laudanum, and is an exceedingly valuable preparation for many reasons, and one which has the strongest claims to your notice. Being of the same strength as laudanum, it saves the trouble of learning and remembering new doses, and in addition to this, it possesses the more important advantages of inducing sleep with more certainty, and not acting as an astringent on the bowels, or affecting the head so frequently as laudanum. You observe that I say *so frequently;* I do so because cases now and then occur in which even moderate doses of the liquor of the muriate of morphia produce quite as much headache as laudanum. I prescribed the former in doses of fifteen drops every six hours, so as to give sixty drops in the day, and continued this practice for two days, but without the slightest effect. Here you see three modes of inducing sleep completely failed. The boy remained for a day without taking any medicine, and then we made another attempt, which was more successful. We first prescribed a purgative enema, and after this had operated, he was ordered an opiate injection, consisting of four ounces of mucilage of starch and half a drachm of laudanum. He fell asleep shortly after using the opiate injection, and did not awake until the next morning. The following night the opiate was repeated in the same form, and with equal success; convalescence went on rapidly, and the boy's health is now quite re-established.

Here, then, is a singular fact attested by this case, that opiates in the form of injection will succeed in producing sleep, where they have completely failed when administered even in large and repeated doses by the mouth. Baron Dupuytren was the first who made this important observation, and proved that narcotics applied to the mucous surface of the rectum exercise a powerful influence on the nervous system, always equal, and very often superior to the effect produced by taking them into the stomach. He maintains that, in delirium traumaticum and delirium tremens, a certain quantity of opium, when prescribed in the form of enema, will act with more decided effect in allaying nervous excitement, than the same or even a larger quantity, when taken by the mouth. I have no hesitation in giving full credit to this assertion, as the results of my experience tend strongly to confirm its truth.

The two following cases exhibit striking proofs of the utility of this practice, and of its great superiority over the common method.

J. B., aged 30, by profession a surgeon, was admitted into Sir Patrick Dun's Hospital on the 8th of February last, in an extreme state of emaciation and debility, in fact, a complete skeleton, and unable to support himself on his legs. His face was not so haggard or thin as might be expected, considering the extraordinary state of attenuation of his body and extremities, and in this respect, as well as in general appearance, he considerably resembled the *living skeleton* lately exhibited in France and in England. He had not the least fever; his digestive organs appeared quite healthy; his breathing natural; he had no cough; nor did he complain of any pain in the head. To what then was the reduction of flesh and strength owing? Partly to the effects of disease; but chiefly to abuse of those two powerful medicines, mercury and opium. The history of his case may be given in a few words. He was formerly much subject to gout and gravel. About three years ago he got a chancre and bubo, which yielded to the use of mercury: six months afterwards, in consequence of cold, he was attacked with arthritic inflammation of various large and small joints, combined with mercurial periostitis. The arthritis did not yield to the usual remedies, and he was therefore induced at different times again to try mercury. The constant pain and sleeplessness produced by these complaints rendered him unable to pursue his business, and he sank into a state of abject poverty. His constitution became more and more impaired, and a cutaneous eruption, in every respect resembling the milder varieties of rupia prominens, made its appearance, while an ulcer commencing inside the left nostril completely destroyed the nasal cartilage, so that the tip of the nose has fallen in. From his account, it would appear that some portion of the spongy bones had been also destroyed; one of the spots of periostitis had evidently produced extensive exfoliation of the os frontis, but the part is now healed; he has no sore throat; his gums are sound, and his tongue perfectly clean and moist; he has no thirst, and his appetite is good; bowels quite regular; the few remaining spots of rupia, the arthritic swellings and pains now become chronic, extreme debility, and an utter want of sleep, except when under the influence of enormous doses of opium, form the catalogue of his present complaints.

For the last two years he has never had sleep at night, except in consequence of an opiate. He was first induced to take this medicine in order to relieve his pains; but latterly it is not pain, but the impossibility of sleeping except when under its influence, that has forced him to use it constantly. He has often taken two ounces of Battley's solution in the day! Very large doses of opium act on the bowels as an aperient, and the use of this drug never produces headache, furred tongue, thirst, nausea, or the least disturbance of the circulating system. For a few nights after his admission into the hospital, he got two drachms of black drop every night; but it was not enough to procure sleep, and he consequently entreated me to double the dose. But I refused, and ordered the following treatment:—Three drops of Fowler's arsenical solution three times a day; a nutritious but mild diet; some wine at dinner; sarsaparilla broth, one pint daily; a starch enema, with one scruple of black drop, three times a day. The good effects of this treatment became soon apparent; his sleep gradually returned, and in the course of a fortnight was sounder and of longer duration than it had been for years. He daily gathered flesh and strength, and, in the course of a month, was so altered for the better, that were it not for the depressed nose, no one could have recognized him to be the being whose misery a month ago had so strongly excited our commiseration. The arthritic affection has rapidly subsided, and with returning strength he is regaining the use of his limbs.

The following case exhibits the good effects of opiate injections in a manner not less striking than that just detailed. A professional gentleman of great abilities and strength of mind about ten years ago was attacked with neuralgia of a severe description. The disease, which was caused originally by cold, pursued a most anomalous course, giving rise to amaurosis of one eye, ptosis and permanent strabismus of the affected eye;

contrary to the expectation of both Sir Astley Cooper and Sir B. Brodie, to whom he was introduced by his friend the late Dr. Wollaston, the symptoms of cerebral disease made no further progress; but the neuralgic affection of one of his lower extremities became intolerable, occurring in paroxysms of extreme violence, and only to be alleviated by repeated doses of opium. After the lapse of some years, the neuralgia became complicated with pain and swelling of the knee-joint, which still further added to his sufferings, and rendered him a complete cripple. This joint is now permanently enlarged, and within the last two years the lower extremity of the femur seems to have formed an enormous exostosis of an equal growth all around its circumference, but not encrôaching on the articulating surface of the bone, which still enjoys the slightest possible degree of motion, although it cannot be moved far from its flexed position. The neuralgic pains, if such they were, have within the last four years been worse than ever. During the paroxysms he has frequently been forced to take 100 grains of opium, much to his annoyance; for he found that it occasioned subsequent nausea and vomiting, stupor, and other unpleasant symptoms, while the constant repetition of this drug had completely destroyed his appetite, and, what he most deplored, had sensibly impaired his memory and mental powers. At length he was advised to use it in the form of injection. The alleviation produced by this change has been most astonishing: half a drachm of laudanum thus used when necessary twice or three times a day, effectually alleviates his suffering, and does not produce any of the bad effects before enumerated. His appetite is now good, his spirits cheerful, and his powers of mind unimpaired.

It is unnecessary for me to enter here into any discussion with respect to the nature and treatment of delirium traumaticum, and the sleeplessness which always accompanies it, as you will find this subject very ably treated in M. Dupuytren's works, and in a very instructive and elegant lecture delivered by Sir Philip Crampton in this hospital, and published in the *London Medical and Surgical Journal.* There is, however, one kind of sleeplessness, arising from irritation of the skin produced by blisters, which frequently assumes a very serious character, and on which it may be necessary to offer a few observations, as the subject has not been noticed sufficiently by practical writers. Trifling as the irritation resulting from a blister may seem, under certain circumstances it is a symptom of highly dangerous aspect and becomes a source of just alarm. I have witnessed the loss of some lives from this cause, and many patients have to my knowledge been rescued from impending danger by an early and proper share of attention being directed to its phenomena and treatment.

The bad effects on the nervous system, occasionally produced by the application of blisters, are somewhat analogous to those which result from wounds and other external injuries, and to be accounted for on the same principle. Wounds and injuries sometimes make an impression on the nervous system, by no means proportioned to the importance of the injured organ to life, or the extent of the mischief. An injury produced by a body which strikes the sentient extremities of the nerves with great force will sometimes produce very remarkable effects on the system. Thus, a musket-ball striking a limb, may, without wounding any great artery or nerve, or destroying any part of importance to life, produce a train of nervous symptoms of an extraordinary character. The person, without feeling much pain, and scarcely knowing that he has been wounded, without being terrified or having his imagination excited by any apprehended dangers, turns pale, gets a tendency to faint, and sometimes actually dies from an impression made on the nervous system. In the same way an external injury reacting on the nerves may bring on high mental excitement, delirium, and a total privation of sleep, as we see exemplified in delirium traumaticum. I mention this with the view of establishing the proposition, that impressions made on the sentient extremities of the nerves are sometimes reflected on the nervous centres, producing the most alarming effects. In this way we can understand how the irritation of blisters may produce sleeplessness, mental aberration, and a train of symptoms analogous to those which characterize delirium traumaticum.

The delirium and sleeplessness arising from the irritation of blisters is by no means an uncommon disease. I have seen many examples of it in private practice, and I am anxious that you should be acquainted with its nature and treatment. It is generally met with in the case of children, in whom the cutaneous surface is extremely tender and irritable. I could relate several instances in which I have been called on to visit children labouring under fever where symptoms of high nervous excitement were present, and where I found the little patients delirious, screaming, and perfectly sleepless from this cause. I have found this alarming affection generally occurring at an advanced stage of fever, and exhibiting a train of symptoms which closely resembled hydrocephalus. I have observed that after the application of a blister to relieve some suspected cerebral or abdominal or thoracic affection, jactitation, restlessness, constant application of the hand to the head, and delirium have appeared, and that these symptoms had been mistaken for incipient cerebritis or hydrocephalus, and treated with leeches and purgatives. When the blister has been applied to the nape of the neck, the soreness and irritation of the skin on that part *cause the child to roll its head from side to side on the pillow, with that peculiar motion and scream supposed to prove to a demonstration the existence of hydrocephalus.* I have learned, also, that the above measures, so far from giving relief, have only tended to produce an exacerbation of the disease, and that the medical attendant has given up the case in despair.

Now, gentlemen, if called to such a case, what should be your practice ? In four cases of this kind I gave my opinion frankly to the medical attendant, and told him he was pursuing a wrong course, that the disease was analogous to delirium traumaticum, and not to be treated by leeches or purgatives, and least of all by blisters. I observed to him that these symptoms had made their appearance shortly after the child had been blistered for suspected disease of the belly, or head, or chest, and that it was useless to attempt to remove the disease by leeches, or purgatives, or blisters. The remedy I always proposed was opium ; and it was acknowledged in four or five cases that this remedy had succeeded not merely in relieving the existing symptoms, but in saving the patient's life. In such cases, particularly in young children, the opium must be given in small but frequently repeated doses, so as to ensure its energetic but safe action ; and the greatest care must be taken to soothe the irritated portion of the skin by ointments, poultices, &c., *while unwearied diligence must be bestowed upon the task of preventing the child from scratching the blistered surface.* To effect this, the child's hands must be muffled in appropriate gloves, and must be secured in the sleeves of a shirt made for the purpose.

I beg your attention still further to this subject of sleeplessness and delirium. I wish to mention the case of a gentleman who was a pupil of mine. This gentleman studied hard, attended lectures regularly, and was constantly in the dissecting room. While thus occupied, he happened to wound one of his toes in paring a corn, and afterwards wore a tight shoe on the injured foot. A small, imperfect abscess formed in the situation of the corn, which was opened by one of his fellow-students; the incision gave very great pain, and was not followed by any discharge of matter. Next day he was feverish, and the lymphatics of the injured limb became extensively engaged, the inflammation ascending towards the glands of the groin, and having a tendency to form a chain of insulated patches in different parts of the leg and thigh, along the course of the lymphatics. This you will generally find to be the case in inflammatory affections of the lymphatics; the inflammation is seldom continuous, but, in the majority of cases, is developed at certain insulated points, where small diffuse suppurations form very rapidly. After a few days this young gentleman's fever increased to an alarming height; he became completely sleepless, and had incessant delirium. He was purged briskly, leeched extensively and repeatedly, his head shaved, and cold applications so constantly applied that he appeared half drowned and collapsed. Notwithstanding this very active treatment, not the slightest relief was obtained; neither were the symptoms mitigated by incisions made in the inflamed patches for the purpose of evacuating matter; the sleeplessness continued, and the delirium was as wild as ever.

I saw him on the seventh or eighth day, when all antiphlogistic measures had failed, and his friends were quite in despair. On being asked my opinion, I stated that I looked upon the case as one of delirium, not proceeding from any determination to the head or inflammation of the brain, but depending on causes analogous to those which produce delirium traumaticum, and that instead of antiphlogistics I would recommend a large dose of opium and some porter to be immediately given. Mr. Cusack, who visited the patient after me, concurred in this view, and a full opiate was administered in repeated doses. It succeeded in producing sleep, and tranquillizing the nervous excitement. I may here observe, that a few days afterwards this gentleman had a return of the symptoms of cerebral disturbance, with sleeplessness, in consequence of omitting his opiate, and that the opiate and porter were again administered, and again succeeded in removing the delirium and watchfulness. By perseverance in the use of the same means, the disease was completely removed, and convalescence established.

There is another kind of sleeplessness frequently met with in persons of a nervous and irritable disposition, in hypochondriacs and hysterical females. You will find such persons, although of active habits and with tolerable appetites, complaining of a total privation of their natural rest, and it is astonishing to think how long they may continue subject to this harassing watchfulness. I have frequently observed this affection among females of nervous habit, who possessed strong feelings of attachment to the interest and welfare of their families, and who were remarkable for an exemplary and over-anxious discharge of their domestic duties. It is also very often met with in the upper classes of life, where the susceptibility to nervous excitement is morbidly increased by fashionable habits.

I shall not enter into the various moral causes which tend to produce this state of the nervous system, and will content myself for the present with giving you some hints for the treatment of this obscure affection. As yet I have not any distinct and accurate notions of the disease, and can only guess at the treatment; but this I may state, that such cases are not to be cured by the means which I have already detailed. If they are to be cured by any means, I think it is by anti-spasmodics, and remedies which have a gentle stimulant, and, if I may so express myself, alterative effect on the nervous system. I have cured two cases of this kind by musk and asafœtida, where every other remedy had failed. To one of these I was called by Dr. Neason Adams. The patient was a lady of delicate constitution and hysterical habit; she was emaciated, and suffered from a total loss of rest, but had no other disease. All kinds of narcotics had been tried unsuccessfully, and opium, in all its forms, had failed in procuring sleep. I advised the use of musk in doses of a grain every second hour, and this means proved eminently successful. In another case I succeeded by administering the same remedy in combination with asafœtida. I have also remarked that asafœtida alone, given in doses of two or three grains three times a day, has very considerable effect in calming nervous irritation of this description, and restoring the patient to the enjoyment of more prolonged and refreshing sleep. In all such cases the physician must be most careful to have the appearance of not thinking the loss of sleep as a matter of much consequence, and the family of the patient must be directed to speak as little about the matter in his presence as possible; nay, so powerful is the operation of moral impressions, that in one case, which I attended with Mr. Halahan, I succeeded in procuring sleep by ordering a musk pill to be given every second hour, night and day, and by desiring the patient to be awakened, should she be asleep, at the time the pill was to be taken. I laid great stress on the importance of so proceeding, and thereby produced so strong an effect on the patient's mind, and inspired so great a confidence in the efficacy of the medicine, that she went to bed, not so much afraid of lying awake as afraid of being asleep at the hours when she ought to take a pill. The idea which had hitherto fixedly occupied her mind was displaced by a new impression, and relief was obtained the very first night.

In affections of the head, occurring in acute diseases and attended with raving and sleeplessness, it is a very usual practice to direct the application of cold lotions to the shaved scalp.

Permit me, gentlemen, to make a few remarks on this important subject. I wish I could make myself well understood on this point, for I have seldom met with any person who seemed to bear in mind the true principle upon which cold is applied as a means of repressing local heat. In cases of determination of blood to the head occurring in fever, the common practice is to have the head shaved and cold lotions applied. Enter the room of a patient who is using cold applications, and you will observe the process conducted with great apparent nicety; the head is accurately shaved, and carefully covered with folds of linen wet with a lotion, to which spirit of rosemary or some odoriferous tincture has communicated an agreeable and refreshing smell; but when you come to examine the patient, you will find his head smoking, and the heat of his scalp increased. The nurse applies the lotion once every half hour, or perhaps not so often; indeed she seldom repeats the application until her notice is attracted by the steam rising from the patient's head, or until she herself, awakening from a comfortable sleep, and going over to examine the state of the patient's head, finds the folds of linen which cover it as hot and as dry as if they had been hung before a fire. Whether applied to reduce local inflammation in any part of the body, or to cool the scalp in determination to the head, cold lotions, as ordinarily employed, do infinitely more harm than good. The cold is applied at distant intervals, its effect soon ceases, and reaction constantly takes place, leaving the part as hot, or even hotter, than it was before.

If you put your hand into snow for a few moments, and then take it out, it quickly resumes its natural heat; and if you repeat this at considerable intervals, so as to give time for reaction to occur, the vessels assume a more energetic action, and it becomes hot and burning. If you continue to keep it in the snow for a long time, its heat becomes completely exhausted, reaction does not take place until after a considerable period, and very slowly, and the hand remains at a very low temperature for a good while. Bear this in mind, for it will direct you in the application of cold to reduce local heat. If cold applications be used at such intervals as to allow the scalp to react and resume its heat, rely upon it, it is much better to forbid them altogether. Where you wish to apply cold with effect, let it be done by relays of folded linen, wet with any frigorific mixture, and repeatedly applied to the scalp, so as to permit no smoking, or, what is much better, get three or four bladders, put into each a quantity of pounded ice, and apply one over the crown of the head, one on each side, and lay one on the pillow for the back of the head to rest on.

There is a vast difference between a thing being done and its being well done: so it is with regard to cold lotions; so difficult is it to insure their proper application, that I have entirely given them up in hospital practice, and rarely order them in private. I have been induced to abandon them in consequence of witnessing so many instances in which my directions were neglected, and consequently the cerebral congestion was augmented by their mal-application. Another serious inconvenience frequently arises from their use when applied in a slovenly manner, which is, the danger of cold, arising from the pillow and bed-clothes being wetted.

It is a curious fact, that the head is the only one of the three cavities with respect to which long-established custom has laid down the maxim, that when its contents are inflamed, we may cool the surface over it; while in inflammatory affections of the thoracic or abdominal viscera, this practice is avoided as dangerous and inapplicable. Latterly, however, some medical men have been inclined to question the grounds on which cold applications have been rejected in the two latter cases, and some have even declared that they have used ice poultices in inflammation of the chest and belly with great success and perfect safety.

I am not as yet prepared to adopt this practice, although I must confess that a review of the subject might incline me to give up my prejudices on this point. It is certainly reasonable to think that what is true of the one may be also true of the other, and that the application of cold to the head, and heat to the chest and belly, has nothing in its favour beyond mere custom. It should be recollected, however, that the head and face are more accustomed to cold than the chest and belly, and hence are less liable to any mischief likely to arise from its application in an intense degree. Still I am inclined to think that there is much prejudice connected with the practice of applying cold to the head, and I have very little doubt that if the matter were properly investigated, and a number of experiments made, it would lead to the abandonment of cold applications in most inflammatory diseases of the brain. In fevers, as I have remarked in a previous lecture, they are, in the majority of cases, certainly injurious *as usually applied;* sponging the bare scalp with tepid or warm vinegar and water, or *even frequently-repeated stuping of the head and temples,* will often succeed much better in abating the headache and restlessness of fever than any cold applications whatsoever. In 1832, a violent influenza, accompanied by most distressing headache, attacked thousands in Dublin; this intense pain in the head was relieved by nothing so effectually as by diligent stuping of the temples, forehead, occiput, and nape of the neck *with water as hot as could be borne.*

I do not speak here of the application of cold to the head for the purpose of relieving local heat and inflammation, but to produce an effect on the whole system. Cold thus applied is of decided and unequivocal value. You are aware that in cases of fever accompanied by symptoms of high mental excitement and great heat of skin, the use of cold dashing has produced the most extraordinary effects. Again, if a patient has taken too large a dose of prussic acid or any other narcotic, the best mode of rousing him is by pouring water on his face or chest from a height. In Turkey, if a person happens to fall asleep in the neighbourhood of a poppy field, and the wind blows over it towards him, he becomes gradually narcotized, and would die, if the country people, who are well acquainted with this circumstance, did not bring him to the next well or stream, and empty pitcher after pitcher on his face and body. This occurred to my friend Dr. Oppenheim, during his residence in Turkey, and he owes his life to this simple but effectual treatment.

I have already spoken of the extraordinary effects produced in some cases by the administration of narcotics in the form of enema; I have seen excellent results also from their external application. The following is a good example: in June, 1831, a lady consulted me for a very severe headache, which came on at uncertain periods, and then continued one or even several days, during which time the agony was occasionally intense. She often passed sleepless nights; but although necessarily exhausted by so much suffering, her general health is tolerable, and during the intervals between the paroxysms she is active and in good spirits. Usually the pain comes on at a certain hour in the evening, continues during the night, and diminishes about the same hour in the forenoon; but at times the pain continues for several days, without any appreciable intermission. As she is of a bilious habit, I attempted the cure in the first instance by emetics, followed by purgatives, and finally by tonics, without producing the least benefit. Carbonate of iron, sulphate of quina, and arsenic, were successively tried in vain.

At last, being sent for to see her in one of the violent paroxysms, I directed the scalp to be well stuped, and a narcotic plaster to be afterwards applied. I should have mentioned that the hair had been frequently shaved, for the purpose of trying tepid shower baths, and that she had never complained of tenderness in any part of the head, or even the feeling of external soreness, the sensation of pain being constantly referred to an internal headache. These circumstances were very unpromising, so far as regarded the probability of her receiving relief from the external application of narcotics; and to tell the truth, when I ordered the plaster, I myself did not expect much advantage from its use; and yet, strange to say, this method proved most effectual, as the pain immediately disappeared, and did not return for seven weeks.

She wore the plaster for a month, and when the pain returned, a second plaster again banished it. The following is the formula for this plaster :—Powdered opium, two scruples; camphor, half a drachm ; Burgundy pitch and litharge plaster, of each sufficient to make a plaster.

The quantity of narcotic ingredients given in this formula is sufficient for the largest sized plaster, for smaller, they must be proportionably diminished; such plasters are of great service in rheumatic and neuralgic pains of the chest, back, and loins, and occasionally they prove useful in sciatica; in the advanced stages of phthisis much suffering is frequently produced by stitches, soreness, and pains in the sides and chest; in such cases I always direct the part to be well stuped, and then rubbed with warm laudanum; this will very often procure immediate relief, but if it does not we must apply a few leeches, and favour the flow of blood by the application of a cupping-glass. Occasionally a very small venesection is necessary, and the application of a small blister to the painful part. Those who have not been engaged in practice will perhaps expect directions to enable them to distinguish which of these modes of treatment is suited to any particular pain. The pain of *pleurodynia*, they will say, is to be treated in one way, and that of pleurisy in another: now in the advanced stages of phthisis it so happens that the pleuritic affection occupies so small a space in most cases, that it cannot *a priori* be detected by the usual means of percussion and auscultation, and consequently we must try the remedies I have mentioned in succession; indeed I have seen laudanum and anodyne plaster succeed, where others believed that severe applications would have been necessary. In *crick of the neck*, diligent friction with laudanum affords immediate relief. The external application of narcotics might also prove serviceable in chronic sleeplessness, where their internal administration had failed. Another method of employing narcotics which I have found very useful, is by means of flannels wrung out of the hot infusion of the remedy we wish to employ; the effect is increased by covering them with oil silk.

Sleeplessness, gentlemen, as I have before remarked, is often and very correctly looked upon as indicative of the approach of insanity, but I have seen many cases in which the attack was ushered in by deep sleep. One case that I attended some years ago in Lower Mount Street, with Dr. Stokes, was peculiarly illustrative of this. Two young gentlemen, college students, went to bed in perfect health the night previous to their examination; they slept soundly all night; the elder rose early in the morning and left his younger brother in bed still asleep; he remained so for two hours more, having slept altogether for more than ten hours, when he awoke in a state of complete insanity, from which he did not recover for some months.

A form of chronic sleeplessness is not unfrequently met with, where individuals suffer from almost total want of rest for months together, without any loss of flesh or any visible impairment of their constitution. Such cases get well of themselves, after a longer or shorter period, and do not require any medical treatment. You should, therefore, not be too busy in prescribing narcotics, as they seem rather to aggravate this state of the nervous system. One gentleman of my acquaintance suffered for many years from this inability to sleep, without the least injury to his health. He was in the habit of getting on horseback in the middle of the night, and riding violently for several hours together, but he could not procure the least sleep even after this violent exercise. In his nocturnal equitations (in which he rivalled Charles the Twelfth, who, it is narrated, rode from Damotica, in Turkey, to the Baltic port of Stralsund, having been on horseback night and day for five weeks) he was frequently stopped by the police, until they became at length accustomed to his habits.

To conclude, I may observe that sleeplessness in a chronic form is often produced by dyspepsia, and can only be relieved by means suited to indigestion. Here it is that small doses of blue pill and tonic purgatives are of infinite service, combined with change of air and scene, and an appropriate diet. In many females, sleeplessness is combined with menstrual irregularity, and can only be cured by means calculated to invigorate the health and restore the catamenial discharge to its natural periods and quantity, for the nervous system suffers equally whether they be suppressed or over abundant. It is singular how long sleeplessness often continues in chlorosis, without inducing those serious consequences that are produced by this symptom in other morbid states of the system. In such cases much is sometimes accomplished by means of the common preparations of morphia, or by the use of Hoffman's liquor, camphor, and other medicines that act upon the nervous system. It must be confessed, however, that these, as well as every other expedient to obtain sleep, often fail in chloritic and hysterical females, in whom relief is only obtained by a gradual improvement of the general health and menstrual function.

LECTURE LXX.

THE MODE OF ADMINISTRATION AND EFFECTS OF VARIOUS MEDICINES.—CONCLUSION.

I PURPOSE in the present lecture to lay before you the results of my experience of the action of certain medicines, and also to offer you some practical observations on their administration. And, first, with regard to the best method of administering calomel in acute inflammation.

Although the antiphlogistic effects of calomel are well known, and every day witnesses examples of inflammations cured by its exhibition, still practitioners are not agreed as to the doses in which this powerful remedy ought generally to be given. The following remarks, derived from very extensive opportunities of observation, apply not to the treatment of chronic diseases, not to that of inflammations, either slight in degree or occupying parts not essential to life, but to those violent attacks of inflammatory action which so often prove fatal, in the course of a few days or even hours, by destroying the texture and functions of vital organs.

If a person is seized, for example, with very acute pericarditis, how unavailing will be our best directed efforts unless they be seconded by a speedy mercurialization of the system? In proof of this assertion, I might adduce a considerable number of cases of pericarditis, treated both in hospital and private practice, and might triumphantly compare the results with those obtained in the Continental hospitals, as recorded by some of the most eminent German and French physicians. When even the most violent attacks of pericarditis are met with copious venesection, repeated leeching, and the rapid ingestion of calomel, few patients will be lost. If, on the contrary, the practitioner rely solely on the lancet, if in the beginning, as I have seen done, he applies a blister over the heart, and if he defer the exhibition of calomel, *or use it insufficiently*, then will he have occasion to regret the consequences, and witness either the speedy death of his patient, or his condemnation to the sufferings entailed on him by adhesions, valvular disease, and the other sequelæ of badly treated pericarditis.

What has been said of pericarditis applies equally to the *more acute and violent forms* of peritonitis, hepatitis, pneumonia, pleuritis, and dysentery. The latter disease rarely occurs with such violence in this country as to require the method of mercurial treatment so successfully practised in the East and West Indies, and which is precisely the mode of treatment I now venture to recommend in the above mentioned diseases, whenever their attack is very violent, and they threaten an immediate destruction of life. In any acute and sudden iritis, when vision is speedily endangered, the same treatment is applicable.

The mode of exhibiting calomel referred to is well known to all those who have practised in tropical climates, and has been most clearly explained, and its advantages placed in the true light, by Dr. Johnson, in his classical work on the Diseases of Tropical Climates. He proves by numerous examples, that when an inflammation threatens the destruction of a vital organ, then, in addition to the lancet, and other antiphlogistic remedies, we ought to affect the constitution decidedly and as speedily as possible by means of calomel, given not in small doses often repeated, but in doses of a scruple, once or even twice daily. These larger doses, he observes, are much less apt to be rejected by the stomach, much less likely to gripe or produce troublesome purging, than small and frequently repeated doses. In this assertion of a fact so curious and so difficult to explain, he is borne out by the testimony of every writer who has practised in the East or West Indies.

The opponents of this practice here have frequently observed that such doses of calomel may, it is true, be given with advantage in hot climates, and may be well suited to the constitutions of persons inhabiting tropical countries, but we cannot thence infer that they may be exhibited either with safety or benefit to Europeans in their native climate. This observation, no doubt, deserves attention, but its weight must fall to the ground if experience, contrary to the general received opinion, shows that with proper precautions calomel may be given in as large doses here as in the East Indies. I am particularly anxious not to be misunderstood, and should be very sorry to see myself ranked among those who have recourse to mercury on every occasion, and who may be said to abuse, not to use calomel in their practice. Mercury in even the mildest form should not be given except the nature of the disease imperatively calls for its use, and in those cases only where no other remedy will effect the same purpose. Calomel in large doses, or even in small, I scarcely ever order except life is in danger, or an important organ (as the eye in iritis) threatened with destruction.

In chronic complaints, in dyspepsia, constipation, &c., the prudent physician will scarcely ever order mercury in any shape; for, as I have mentioned to you in a previous lecture, the blue pill system of Abernethy and others has been productive of infinite mischief. Many army surgeons, on their return from the East, have continued to use scruple doses of calomel in acute diseases; but their example has not generally been followed, and I am pretty certain that in Dublin I was the first who, both in hospital and in private practice, had recourse to such doses. When life is in danger, and we have determined on this method of treatment, the following precautions are to be observed:—The patient must take no cold fluids. Whatever he drinks must be moderately warm; barley-water without lemon juice should be preferred; and he should not consume more than three pints of drink in the twenty-four hours, as too much drink disturbs the stomach and bowels, and favours mercurial diarrhœa. Grapes and all fruit must be withheld—a precaution too often entirely neglected, much to the patient's injury; for I have seen a tympanitic state of the abdomen induced by fruit, particularly grapes. In the South of France, in Italy, and in Spain, grapes form a most useful article of diet in inflammatory and feverish complaints; but they are there generally of a better quality than those we here commonly meet with in the sick-room; and, besides, they form a common article of diet during health. Be the reason of the difference what it may, I can assert from experience, that in this city the physician will act wisely in forbidding grapes altogether in fevers, and still more in all diseases where he thinks it right to give mercury internally.

When we wish a scruple of calomel to be taken at once, an excellent method is to place the powder on the tongue, and make the patient wash it down with some thin gruel, or else it may be given in the form of a bolus. In most cases one such dose daily is sufficient; but it now and then happens that very imminent danger will prompt us to give a second dose after the lapse of twelve hours. By this management we are often enabled to mercurialize the system fully in a very short space of time indeed, and we thereby not only cut short a dangerous inflammation, and save our patient's life, but we often effect this purpose without exciting any considerable griping pains or bowel complaint. Such accidents will of course occasionally happen, no matter how mercury is introduced into the system, no matter whether administered in the form of inunction or internally; but I can safely appeal to those amongst you who have witnessed my treatment of the pneumonia and pleurisy epidemic last winter and spring, for confirmation of the assertion, that the curative effects of this mode of giving calomel were most striking, while the occurrence of griping or bowel complaint was comparatively rare, a circumstance partly owing also to the care taken to prevent such patients from being exposed to cold.

Another point well worthy of attention remains to be considered. In general it is supposed that at the time mercury is about to affect the mouth, it produces a degree of constitutional fever, acceleration of the pulse, &c. Now, I can assert with confidence, that when fever produced by inflammation, such as pericarditis, pleurisy, &c., has existed before the calomel was exhibited, the latter will in nine cases out of ten produce, at the moment the mouth becomes affected, a marked abatement of fever, a marked diminution of the frequency of the pulse. When, as will happen in some cases, particularly such as have been neglected at their commencement, this diminution of fever, this retardation of pulse does not accompany the mercurialization of the system, let not the practitioner deceive himself; it is a bad sign: it is still worse if the pulse become accelerated and the fever increased: in such cases the disease is rarely arrested in its progress. This observation may seem unnecessary, but I know it is important; for I myself have been deceived, and I have seen others of far greater experience deceived at such a crisis, into the belief that the increase of fever and the acceleration of the pulse were owing to the mercury, and not to an aggravation of the disease.

Another most important question is, whether mercury so used for the cure of internal inflammations injures the constitution permanently? With the greatest confidence I can answer, it does not. I never saw a single bad effect follow the use of mercury, in cases where the first consequence of its exhibition was the rapid and complete removal of a dangerous inflammation: a remedy can scarcely serve and hurt the constitution at the same time. Mercury when it abates inflammation never irritates the system; and if it be discontinued when it has performed this important office, its after effects will be employed in the same way, in curing the remnant of the inflammatory action. In this I entirely agree with Mr. O'Beirne, who has most successfully combated the generally received dogma, that mercurialization of the system cannot be employed in the treatment of acute inflammations in scrofulous habits. Whatever cuts short the inflammation, provided it be applied in due proportion, cannot injure the constitution.

Now, in chronic diseases, I have found that the very opposite method of administering calomel and other preparations of mercury is attended with most advantage; for, when given in *continuous small doses,* its beneficial influence is best obtained. This rule applies especially to those obstinate cases of secondary syphilitic affections we sometimes meet with, which last for years in spite of all treatment. In a case of this description which I lately attended, periostitis, nodes, venereal eruptions, &c., succeeded each other for more than two years, notwithstanding the use of all the usual remedies as ordinarily administered; a perfect cure was established in less than three months by the administration of *one grain* of blue pill daily. In a case of epilepsy, also, which I attended, I gave one grain of calomel nightly for two years; it did not produce salivation or any other manifest constitutional effects, yet at the end of that time the fits were completely stopped.

Respecting the local application of mercury, I have one remark to make. You do not forget the man in the upper ward, who had periostitis affecting the scalp. This disease was very obscure in its symptoms, and was accompanied by severe pain and irritation, so as to deprive him entirely of rest. It was hard to make out what it was; we however ascertained its nature, and decided that salivation would cure it, and this was the case: the man got considerably better as soon as we had made his mouth sore, but still some pain remained. What did I do? I ordered mercurial ointment to be diligently rubbed to the seat of the pain; the very night it was done the man got relief. I cannot explain this; but it appears to be a proof that the opinion of the older physicians on the utility of mercury locally applied is well grounded. You know it has been lately shown that one of the best applications we can make to a swelled testicle is mercurial ointment. In a case of violent peritonitis, where we had leeched, blistered, and salivated, you have seen me order a mercurial dressing to the whole of the blistered surface, and you remember I stated that I expected much advantage from it. When, therefore, you have cured a disease by mercury, and there happens to be a partial recurrence of its symptoms, you will hold this treatment in memory, and have recourse to it.

I shall next speak of the effects of tartar emetic in certain chronic diseases. In persons of a weakly habit, and in those who have passed the meridian of life, it sometimes happens that the symptoms of an acute disease, *particularly bronchitis*, subside, leaving the patient, however, in an extremely debilitated state, free from fever, but entirely destitute of appetite.

In such cases, day after day passes away without any increase of strength, while nothing is complained of but weakness and total want of appetite. The skin is cool, the pulse indicates no remnant of fever, respiration is free, the abdomen soft and natural, and the alvine discharges exhibit nothing to account for the remarkable want of digestive energy on the part of the stomach.

In this state of the patient, the most constant and peculiar symptom is the appearance of the tongue, which is always moist, and has its whole upper surface covered with a remarkably thick, white, smooth, and tenacious paste. Nausea is seldom complained of, neither is inconvenience experienced from thirst or bitter taste in the mouth, but whatever food is taken appears nearly tasteless and insipid, and the tongue and mouth feel clammy and uncomfortable.

This state has been long noticed by physicians, and various remedies proposed for its removal. The most obvious mode of proceeding is the exhibition of purgatives, followed in due time by tonics; and when this method is pursued with judgment, it will prove successful. Tonics in the first instance, and while the tongue is in the state above described, are always injurious. Two cases which occurred in the hospital excited much interest, on account of the previous obstinacy of the disease, and the rapid improvement which attended the adoption of means believed by most of the students more likely to injure than to serve the patient. The following was the method of treatment employed, and I have found it in several other cases of a similar nature very effectual in restoring appetite and promoting convalescence.

The patient is put on low diet, consisting of white bread and whey; milk is altogether interdicted, as it invariably appears to aggravate the symptoms. During the day the patient takes every hour a tablespoonful of a solution of one grain of tartar emetic in twelve ounces of water; if it nauseate the stomach, the dose is to be diminished. This plan is persevered in for two days, and an emollient enema is administered in the evening if necessary. On the third day the same plan is continued until dinner time, when the patient gets meat and vegetables, and is encouraged to make as hearty a meal as possible. In an hour after this an emetic, consisting of twenty grains of ipecacuanha and one grain of tartar emetic, is exhibited, and vomiting promoted by copious draughts of tepid water; during the two following days the low diet and minute doses of tartar emetic must be resumed, and on the third day again the full dinner and emetic.

During this course the tongue gradually becomes clean, the desire for food increases, and the general health and strength improve rapidly, when the patient is allowed a more nourishing diet, which, however, must be done with great caution and judgment.

It is an old opinion that tartar emetic in minute doses possesses a peculiar efficacy in softening and detaching the viscid mucus which in these cases loads the surface of the tongue and stomach, and impedes the healthy discharge of the digestive function. Whether the physiological reasoning of our predecessors on this subject are admissible in the present state of science, I shall not stop to examine, my object being now limited to a statement of the fact as practically useful. I was induced to give the emetic after a full dinner on the third day, partly in consequence of some observations of Hippocrates, and partly because it seemed very probably *a priori*, that an emetic on a full stomach would not only cause less distress during its action, but would also prove more effectual, the vomiting being induced at the moment the stomach is engaged with the greatest activity in carrying on the process of digestion, when it is most copiously supplied with blood, and pours forth its peculiar secretion in greatest abundance. Be this as it may, the above plan of giving emetics after dinner, previously exhibiting minute doses of tartar emetic, has seemed to me more useful in many chronic diseases than the usual method of exhibiting them. I can particularly recommend it in cases of obstinate headache, depending on a deranged state of the stomach.

Having mentioned the use of cod-liver oil in the strumous diathesis, I avail myself of this opportunity of corroborating the testimony of those (and amongst the rest, of Dr. Bennett) who have extolled the use of this medicine in strumous diseases in general. I have seen it do what I never saw any other remedy effect, *i.e.*, reduce to the natural size amygdalæ that were enlarged from the period of extreme youth. A most remarkable instance was that of a young lady, aged about 19, whose amygdalæ were as large as small walnuts, and which I treated without effect for two years, both by iodine internally, and nitrate of silver locally. A three months' course of cod-liver oil left no trace of the disease behind. Under the influence of this oil the enlargement of the cervical glands in young persons of a scrofulous habit frequently disappears, and the tendency to the formation of phthisis, and the recurrence of strumous hemoptysis is occasionally overcome. In persons of a consumptive tendency, I consider this as a valuable addition to our remedies.

I have recently used aconite with great benefit both internally and externally in the treatment of painful gouty, rheumatic, and neuralgic affections. The preparation I have used is the tincture, of which I give five minims three times daily. In one case, that of a physician from the country, who had been suffering for months from an exceedingly painful rheumatic affection of the vertebræ of the neck, which prevented the least motion without the greatest torture, a rapid and perfect cure was effected by this medicine. And in another case, in which there was gouty neuralgia of the whole cuticular surface, including even the scalp, it produced equally beneficial effects.

Dr. Mulock has communicated to me two cases illustrative of its action as a local application:—"Miss H., while nailing a curtain to the top of a bedstead, fell on her knees on the feather-bed, and when attempting to rise could not, although there was no appearance of injury; and on the best surgical advice being procured, no injury of any kind could be discovered. The pain and irritability of the part were so great, that she was obliged to put a basket over the joint when in bed to keep off the pressure of the bed-clothes; and even rubbing it gently brought on a fit of hysteria. After the use of many remedies without benefit, a lotion composed of one ounce of tincture of aconite, and seven ounces of rose water, gave decided relief." The second case was one in which a lady strained her knee-joint by slipping on the stairs; the aconite lotion gave effectual relief here also.

The next subject I shall call your attention to is *dry cupping*.

Dry cupping is a remedy not by any means of modern invention; it was known to Hippocrates and Aretæus; and, in succeeding times, among the nations of the European continent and in the British dominions, it was very generally employed, and formerly enjoyed the reputation of being a very fashionable remedy. Of late it has fallen very much into disrepute; it is now very seldom employed, though some persons still use it in hospitals and public institutions, where clinical experiments are conducted on an extensive scale. Mr. Robertson has attempted to revive this practice, and has proved that dry cupping is a very valuable remedy, possessed of curative powers shared by no other therapeutic agent, and capable of being applied with advantage where the ordinary means are perilous or inadmissible.

Some time ago Mr. King, of Stephen's Green, related to me the particulars of a case which exhibited in a very remarkable manner the benefit derived from dry cupping. It was a case of hysterical vomiting in a lady, for which every known remedy has been tried without any favourable result, and which was completely arrested by the application of dry cupping to the stomach and margins of the ribs. This may appear strange to you, and you may be inclined to ask, how is it that a change in the condition of the integuments of the abdomen can affect the stomach? In reply to this I would ask, in inflammation of the stomach, whether acute or chronic, why is it that the application of leeches to the integuments relieves the gastric affection? In the latter the result is equally as strange as in the former instance; the circulation of the stomach is totally distinct from that of the integuments, and yet we have no remedy so efficient in relieving gastric inflammation as leeches applied to the integuments of the epigastrium. Taking away blood from the surface produces a change in the circulation of the internal organs; detaining blood in the integuments, in the neighbourhood of any viscus, acts also on the internal circulation, and effects a corresponding change. Let us investigate this more minutely.

A cupping-glass is applied to some part of the body, and the air contained within it is exhausted by means of a syringe or by heat. In either case the integuments of the part are forced up into the glass by atmospheric pressure, so as to form a hillock, in which a considerable quantity of blood is detained, remaining in the capillaries of the part, and being, as it were, cut off from the general mass of the circulation. The experiments of Dr. Barry have proved the detention of blood in that portion of the integuments submitted to the action of the cupping-glass, and that the quantity so detained does not pass into the general circulation, or partake in its changes. Now, if a given portion of the skin has, in consequence of morbid action, an unusual quantity of blood thrown into it, and cupping-glasses are applied to the integuments in its vicinity, you draw off a great quantity of blood into the portion which you cup, and that part which presented an unusual quantity, in consequence of morbid engorgement, may be, *pro tempore*, drained, and may, during the period of this application, make rapid progress towards health. The same observation holds good when you cup over an internal organ in a state of inflammation. You must be aware of the practice of tying arteries which go to tumors of various kinds, and that the application of the ligature has frequently proved successful in arresting the peculiar inflammatory process by which such morbid developments are accompanied. Now, cupping acts as a kind of temporary ligature on the vessels of the part to which the glass is applied, including even the capillaries;

and it is in this way that it tends to prevent the absorption of poisons locally applied.

Having said so much about the application of cupping-glasses, their *modus operandi*, and their action as local applications, let us see how far the principle may be pushed, and also whether this mode may not be applicable to local affections alone, but also act on the general circulation in such a manner as to produce those effects which are commonly attained by different means. Dr. Arnott, in vol. i., p. 574, of his work on the *Elements of Physics*, makes the following important observations on this subject:—"Reflection upon these circumstances led me to think that, in certain cases, the beneficial effects of blood-letting might be attainable by the simple means of extensive dry-cupping; that is to say, by diminishing the atmospherical pressure on a considerable part of the body, on the principle of the cupping-glass used very gently, and thus suddenly removing for a time, from about the heart, a quantity of blood sufficient, by its absence, to produce faintness. The results of trial have been such as to give great interest to the inquiry, and the author's leisure will be devoted to the prosecution of it. An air-tight case of copper or tin plate, being put upon a limb, and made air-tight by a leathern or other suitable collar, tied at the same time round its mouth and the limb—on part of the air being then extracted by a suitable syringe, in an instant the vessels all over become gently distended with blood; and, as the blood is suddenly taken from the centre of the body, faintness is produced, just as by bleeding from a vein. The excess of blood may be detained in the limb as long as desired, for the circulation is not impeded. To produce a powerful effect with a slight diminution of pressure, more than one limb must be operated on at the same time." From this it appears, that if you take the whole arm or leg or thigh of a man, and place it under this machine, then exhaust it of air, and detain one or two pounds of blood in the integuments, the same quantity is abstracted from the heart and general circulation, and the effect produced is the same as if you had suddenly drawn blood from the system to this amount. The strongest man will faint if you cup both legs. I think this view of the subject opens new ground in the field of practical medicine. You are all aware of the effects, the truly beneficial and admirable effects of blood-letting, and you know also that these depend not so much on the quantity of blood lost, as on the impression produced on the general system. If we have to deal with an extensive and violent inflammation, we do not abstract blood by a minute opening; we make a large orifice, or we open a vein in both arms at the same time, we place the patient in an erect posture, and endeavour to produce deliquium. It sometimes happens that the patient faints from fear, or before any considerable quantity of blood has been lost, and this faintness, as Dr. Arnott remarks, answers as well as that which results from venesection. This I can also testify, for I have seen all the good effects of bleeding produced by the terror with which the operation frequently inspires persons of delicate or nervous temperaments.

Now, by the machinery before described, a machinery by no means complicated, you are able to produce with certainty such a powerful effect on the general vascular system, as to obtain all the benefit derivable from general blood-letting. Dr. Arnott mentions another but more objectionable way of attaining the same purpose, and one which is inferior in efficacy to the mode detailed. If you apply a bandage pretty tightly over the upper part of a limb, suppose, for instance, round the thighs, so as to prevent the return of blood through the veins, and then put the legs into warm water, the quantity of blood detained in the lower extremities will be such as to make the patient faint. This mode may be useful on some occasions, but it is inferior to dry-cupping, and can only be applied to the extremities. There is another and very important point relative to the employment of dry-cupping which stamps additional value on it, from its applicability to cases calculated to excite much solicitude and anxiety in the mind of every practitioner. You have often seen cases of inflammation in which our sole hope of safety, or even life, depends on checking the inflammatory process, when we stand doubting or perplexed, balancing the possibly fatal effect of blood-letting on a sinking frame, with the slower but, perhaps, more certainly calculated close of an inflammation which attacks some vital organ and affects the very sources of existence. If, in such circumstances, we could produce results similar to those which accompany venesection, would it not be a very important desideratum? Now, the employment of dry-cupping holds out to us a fair prospect of attaining this end, of cutting short a menacing inflammation in that particular state of constitution where blood-letting is a perilous experiment, and regulating the errors of morbid action without having recourse to the customary shock of sanguineous depletion. I do not know any better or more valuable auxiliary in the practice of medicine than this, or one which is capable of greater extension and improvement. There is not a single practitioner who does not remember how often he has been forced to bleed, when he knew that he was doing so at the risk of his patient's constitution and life; there is no one who has not, on such occasions, anxiously sought some other means of accomplishing the same purpose; and, as this is promised by the employment of dry-cupping, I think this matter should become the subject of extensive clinical experiment, and that no time should be lost in proceeding to investigate the true properties of a remedy which is likely to open a new era in medical practice. Cupping-glasses might be made of convenient shapes for applying them along the inside or the outside of the thigh or arm, and might be so large that, with the aid of a syringe, the intended effect could be produced in a few minutes. With regard to their operation in cases of local diseases, I think we cannot extend their use too far. There are many cases of hysterical neuralgia, sometimes affecting the side, sometimes the spine, and other parts, which hitherto we have treated by bleeding, leeches, stupes, liniments, and blisters. Fomentations and liniments sometimes succeed in removing this affection, so do leeches, but frequently both fail, and we are obliged to blister, which often produces great irritation without being attended by any decided benefit. Here it is very probable that we would derive very great advantage from dry-cupping in the neighbourhood of the affected part. I have in a previous lecture referred to its effects in the headaches of young ladies. Now these are varied and numerous beyond conception, generally connected with some menstrual irregularity and derangement of the intestinal canal, and forming a class of disorders which would require a good monograph more than any other I know of. Many practitioners get into disgrace with ladies on this account, and, as a natural consequence, with the community in general. Bleeding here is of very little use, and gives only a temporary relief, or even in many cases aggravates the existing symptoms.

The best plan of treatment is to regulate the menstrual secretion, and attend to the state of the bowels. But I will say no more on this subject, for I might lecture on it without end. As to the headache, if you leech, they get worse afterwards; if you apply cold lotions, the same result follows; the best thing that you can do, in my opinion, is to apply dry cupping-glasses to the back of the neck and between the shoulders.

Let us see what dry-cupping has done in those cases which have been treated with it in hospital. A man of the name of Ryan, who has been a long time in hospital, suffering from violent pains, produced partly by rheumatism and partly by neuralgia, complained of very severe attacks of pain in the lumbar region, lower part of the belly and thighs, particularly in the lumbar region, on one side of which the pain and tenderness were excessive. This man had been mercurialized and blistered; he had 100 leeches to the affected parts in eight different applications; he had been stuped repeatedly; he had all manner of liniments and internal remedies I could devise. He was certainly somewhat improved by this treatment, but not so much as I wished. Well, this man has received the most marked benefit and relief of his sufferings from dry-cupping over the seat of the disease.

Another man, named Eustace, who had sciatica, which was cured by acupuncture, and afterwards returned, experienced considerable advantage from this remedy. In the case of a woman above in the fever ward, labouring under bronchitis, we have observed an amelioration of the pectoral symptoms after the application of dry-cupping. It appears to me that cases of pain and tenderness are not the only ones to which dry-cupping is applicable, but that we may employ it also with hopes of success in congestion of internal organs. Cupping over the chest, I think, would diminish if not cut short the paroxysms of spasmodic asthma, of tussis senilis, and of the acute suffocative catarrh. In bronchitis with emphysema it would relieve the congestion of the lungs, and lessen the dyspnœa; and in the violent suffocating bronchitis of children, soon after birth, it seems to be particularly valuable from its rapid effects. In the tremendous and fatal dyspnœa which accompanies this affection in children, bleeding and leeches are objectionable, from the dangers attendant on them, and from their tedious operation, and are decidedly inferior to the prompt and efficacious agency of dry-cupping, which is free from any danger. You will be convinced that I do not overrate the value and advantages of dry-cupping, when you recollect the case of a man in the hospital who has empyema of the left side of the chest. In this case, the whole of the cavity of the left pleura is filled with matter, the heart has been pushed to the right side, and the man breathes only through the right lung. Now this man got bronchitis in his only sound lung, and you can easily perceive what danger he was in. It is obvious, that in such cases, from the long duration of the disease, the immense quantity of pus in the pleural sac, and the weakness of the patient's constitution, bleeding could not be employed without much hazard. We had recourse to small doses of tartar emetic and extensive dry-cupping over the chest. The result of this case, which I could not have treated so advantageously a fortnight ago, is very encouraging, for you have seen the relief this poor man obtained. It may seem to you that I am disposed to think too highly of this remedy; but as I have stated to you before, its properties seem to be analogous to those of general and local bleeding, and it is of the utmost importance to investigate its effects thoroughly, and see if it is capable of the same application and likely to be attended with similar results; or, if there be any difference in applicability, to know where the one and where the other may be employed with the greatest propriety and success.

In an early part of the course, when speaking of the prescriptions in fever, I mentioned the mode of administering carbonate of ammonia in effervescence.

We had a woman in fever here some time ago, to whom we gave the carbonate of ammonia in a state of effervescence; and as the form in which we administered it proved extremely useful, I think it necessary to remind you of it. The carbonate of ammonia is given in excess, in the proportion of about two grains and a half in each draught, as you will perceive by the formula employed:—

℞. Aquæ Fontis, f℥vss.
Syrupi Zingiberis, f℥iij.
Carbonatis Ammoniæ, ʒj. Signetur, No. 1.

The syrup of ginger is used to cover the taste produced by the excess of ammonia, and to prolong the effervescence. Everything syrupy prevents the too rapid escape of the carbonic acid. If the acid and alkaline solutions consist of water alone, there is an instant extrication of carbonic acid, and it escapes, as it were, in a very rapid succession of bubbles; the patient scarcely has raised the vessel to his lips, when the effervescence is over. The syrup thickens the water, and thus offers a resistance to the extrication of the fixed air, and moreover gives the mixture a more agreeable flavour. You next proceed to prescribe the acid solution, as follows:—

℞. Acidi Citrici, ʒj.
Aquæ Fontis, f℥iij. Signetur No. 2.

and then you add,

Sumantur cochlearia duo ampla ex No. 1. effervescentiâ cum cochleare uno amplo ex No. 2.

You perceive, gentlemen, that I am not so poetical as Dr. Paris, who, with a phraseology almost Homeric, says, *Sumatur in impetu ipso effervescentiæ.*[*]

Where effervescing draughts are indicated in the latter stages of protracted nervous fevers, and when it is, at the same time, necessary to administer moderate doses of diffusible stimuli, their combination will be found very beneficial.

I have said that the carbonate of ammonia in these draughts is in excess, for one drachm of this salt would require about seventy-eight grains of tartaric or citric acid to form a neutral compound. When, therefore, you wish to order effervescing draughts, without any notable excess either of acid or alkali, you may prescribe one drachm of carbonate of ammonia in No. 1, and eighty grains of acid in No. 2. These quantities will be sufficient to make six effervescing draughts. If the disease is more of an inflammatory nature, carbonate or bicarbonate of soda should be preferred. Three drachms of the crystallized carbonate of soda will be required in No. 1 to make six draughts, to be taken in effervescence with 100 grains of acid in No. 2. When the bicarbonate is used, the quantity of alkali and acid ought to be ʒij. and 140 grains respectively. Let us, therefore, for the sake of impressing on the memory, place in a tabular form these relative quantities :—

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[*] "So spake the guardian of the Trojan state,
Then rush'd impetuous through the Icæan gate:
Him Paris followed."—*Pope's Iliad.*

Alkaline solution, six ounces.	*Acid solution, three ounces.*	
Carbonate of Ammonia, ʒj.	Tartaric or citric acid,	80 grains.
Carbonate of Soda, ʒiij.	Ditto	100 grains.
Bicarbonate of Soda, ʒij.	Ditto	140 grains.

These proportions of acids and alkalies form effervescing draughts, in which the acid is *quam proximè*, exactly sufficient to decompose the carbonated alkali. In general practice, the same alkaline solutions are ordered to be taken with a tablespoonful of lemon-juice to two of the solution. This is evidently a very incorrect method; for if this quantity of lemon-juice is reckoned equivalent to seventeen grains of citric or tartaric acids, then it is obvious that six tablé-spoonfuls are equivalent to 102 grains of acid. This quantity of lemon-juice, therefore, is, *quam proximè*, sufficient when carbonate of soda is used, but it is too much when carbonate of ammonia, and it is too little when bicarbonate of soda is used. In common cases, this slight excess of either acid or alkali is of no importance, but it not unfrequently happens in fever and inflammatory diseases, that urgent thirst or nausea require the frequent administration of effervescing draughts, while, at the same time, the internal exhibition of calomel, blue pill, or James' powder is indicated. When this occurs, it is of great consequence that the acid used in the draughts should not be in excess, as it might occasion griping and diarrhœa, and consequently, in such cases, I prescribe the acid solution instead of lemon-juice, as its strength is known, and may be regulated with certainty.

A word on sinapisms, and I have done. This species of rubefacient is applied in various diseases, viz., in the latter stages of fever, in pleurodynia, colic, pains of the stomach, and not unfrequently in suppressed or irregular gout, where it is attempted to fix the disease in the extremities. Nothing is more certain than that gout may go astray, and that it may occasionally be called away from important internal parts, by means calculated to excite inflammation on the surface. If a man, in whom a fit of gout was about to take place, sprains his ankle, inflammation of the part is forthwith the consequence, and here the gout at once settles. Within a short period of time I have seen three remarkable examples of the relief which vital organs may experience when gout appears in the extremities. A publican applied to me with violent pain in his stomach, which came on every evening, and lasted many hours in spite of every remedy. In a day or two he got a violent attack of podagra, and had no more internal suffering. A gentleman, whom I attended with Mr. Barker, was attacked with cerebral symptoms and indistinctness of vision and utterance. We feared hemiplegia: the next day he got severe podagra, and was able to speak perfectly well, and see distinctly. He was 75 years of age. At the same time I was attending, with Mr. Colles and Mr. Haffield, a robust and powerfully made gentleman, aged 74, who having had symptoms of flying gout, and shortly after a bowel complaint, made use of the salt-water plunge bath. This imprudent act brought on a violent and nearly fatal hemoptysis. He was bled twice, and got the usual styptics with relief, but his improvement became much more rapid when gout appeared in both his feet.

Facts such as these occur frequently, and leave a strong impression on the mind of the practitioner of the prudence of attempting to bring the gout to the extremities in similar cases. Some try to do this by means of stuping, liniments, blisters, or sinapisms; but it appears to me that the latter are seldom applied in a manner likely to effect the desired object, for when composed of the usual ingredients, sinapisms act too quickly to be long borne, and of course only give rise to a very superficial inflammation, and that of very brief duration. To fix gout in a part, for example, in the foot, our application must act much more gradually, and must excite the deeper seated tissues. These objects may be obtained by mixing one part of strong and fresh-ground mustard powder with three of flour, and adding as much treacle as will convert them into a viscid paste, which may be spread like a plaster on linen, and applied to the part. This will be borne for four or six hours, and will cause a redness which will last a whole day. The proportion of flour may vary according to circumstances.

I have done now, the session is over, and I must conclude. It was usual in my time to spend five or ten minutes at the termination of a closing lecture in flattering the class and indulging in a complimentary strain. I do not mean to do this. I cannot say that you have been idle; but, gentlemen, we cannot be too industrious. Never was there a time when the career of science was so brilliant and so rapid as the present: there never was a time when the inducements were so great to explore, investigate, and treasure up the numerous and deeply interesting mass of facts for which science is indebted to modern discovery. The day is gone by when quackery could impose upon the credulous, and impudence assume the garb of merit; a century ago it was very easy to keep up with the scanty and slow-paced intelligence of the age; men became acquainted with certain opinions which they regarded as fixed and immutable, and here their pursuit of science was abandoned. In our times the field of science is so broad and extensive, and its increase on every side so rapid and so various, that he who wishes not to be left completely behind must employ all his energies with continuous and unremitting assiduity.

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